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INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week

A Housewife Scans the
Frozen Foods Industry
Business Must Awaken

Story of the Week

Little Chris had found a lovely gilt-edged Bible which he bought for Grandma's Christmas present. Of this gift he was extremely proud.

Only one cloud appeared on the horizon to dim the sunshine of his happiness. He couldn't think of an appropriate inscription to write on the fly-leaf of Grandma's gift.

Suddenly he brightened. He had remembered an impressive inscription he had once seen in one of Daddy's favorite books.

So he copied it verbatim:

"To Grandma, with the compliments of the Author."

A Housewife Scans the
Frozen Foods Industry

C. Dale Mericle, keen-minded Associate Editor of the NEWS, has an equally brilliant wife. Looking after Dale and three lively youngsters keeps her mighty busy, but not so busy that she hasn't time to do some thinking about serious matters affecting our related industries.

Here is a letter she has written expressly for "Inside Dope" which contains some shrewd observations on the frozen foods industry as it appears to women at the point-of-sale:

Dear George—

I have just returned from a shopping trip feeling quite indignant. Maybe you and your readers would be interested in my grievance, which is this: The general public, both consumers and shop-keepers, is still so uneducated on the subject of frozen food that it's pitiful.

You see, it is my honest opinion that as far as the daily lives of us housekeepers go, frozen foods rank right next to the atom bomb as the big news of the century; and it really turns me to see good stuff spoiled and potential users alienated because of carelessness and ignorance.

I am frequently surprised, as I stand and gossip in meat-lines, to learn how very many women still never think of buying frozen foods; and I've made a point of trying to find out why. Partly of course it's just the old reluctance to change established habits; but what bothers me is the number of women who have tried it, either commercially packaged or from a friend's locker or home freezer, and found it unsatisfactory. And it's almost always because, somewhere along the line, somebody didn't know enough about the nature and requirements of this comparatively new form of food.

For one thing, a lot of people are still thinking in terms of canned food. One woman said to me:

"I like some frozen vegetables pretty well, but the carrots and peas are never cooked enough."

Another told about helping a friend prepare raspberries for home freezing and wound up with: "Why it was every bit as much trouble as if she'd just canned them." The fact that most frozen food is practically fresh food simply hasn't soaked in yet.

I suspect, too, that some people who freeze their own stuff, either in home freezers or in locker plants, don't realize the importance of strictly following reliable instructions in preparing and storing frozen foods.

I have one neighbor, at least, who will not be persuaded that frozen meats can be any good, because she was once served some home-frozen chicken which was too dry and hard to eat. That's her experience, and I can tell her until I'm blue in the face

(Concluded on Page 8, Column 1)

Presenting:

A New Mystery Serial Drama Entitled
'Freon, Freon, Who's Got the Freon?'

DETROIT — That great mystery serial drama "Freon, Freon, Who's Got the Freon," which has been enthralling the refrigeration industry for the past several months, looked last week as though it might run on for a little while yet before the final act, containing the solution to the mystery, comes off.

The elements of the mystery are relatively simple.

National Association of Refrigeration Contractors has been protesting that refrigeration and air conditioning contractors and servicing firms simply can't get "Freon-12" in quantities sufficient for their needs.

Kinetic Chemicals, Inc., producer of the refrigerant, cites figures to show that it has been producing "Freon-12" at top capacity in quantities sufficient to meet the needs in the field, and company officials don't know why it shouldn't be available unless there is some large-scale hoarding going on. Kinetic officials say that the nature of their distribution system makes it impossible to keep track of the "Freon" which they ship.

Following conferences by Kinetic officials with a group of N.A.R.C. officers headed by Warren W. Farr, Cleveland, president and E. S. Wright, Youngstown, Ohio, secretary, a plan for "emergency" shipments of "Freon-12" was set up as follows:

1. The contractor or service firm

places the emergency order with his already established source of supply such as a refrigeration parts and equipment wholesaler, for transmittal to the national distributor who places the actual order on Kinetic.

2. The contractor must justify the need (that is, the emergency) to the supplier, and this information is relayed to the national distributor.

3. When the national distributor directs Kinetic to make shipment from his allocation, Kinetic will do so immediately.

A shortage of cylinders is one phase of the situation that may tend to keep all the "Freon" that is capable of being produced from reaching the field promptly. Part of this shortage is due to the unavailability of new cylinders; last October, Kinetic ordered 30,000 new cylinders, but only 1,900 have been delivered. Strikes and shortage of steel are largely responsible for this.

However, a more important factor is the whereabouts of cylinders shipped into the field. This seems to be the real mystery. R. J. Thompson of Kinetic told N.A.R.C. officers that at the end of July there were outstanding 105,492 cylinders of the 145-pound capacity, 64,639 cylinders of the 25-pound capacity, and 16,638 cylinders of the 10-pound capacity. This added up to a cylinder capacity in the field capable of holding more than 17 million pounds of "Freon-12."

(Concluded on Page 4, Column 4)

Refusal of Steel Aid Refrigeration Items
To Hit Range Output Set for Dairy Show

WASHINGTON, D. C.—Electric range production is almost certain to suffer from the decision of Civilian Production Administrator John D. Small to give no priorities or other special help in getting steel to electric range manufacturers or similar industries.

"Extra steel for one industry can only come from taking it away from others that need it just as much," Mr. Small told the Electric Range Industry Advisory Committee.

Unless producers of domestic electric ranges get more steel, July and August production which ran at the rate of 121% and 140% of the average for 1940-41, will prove to be only a bulge, the committee said. The committee said that the industry has maintained this high rate of production in the face of acute materials shortages. To maintain production of electric stoves for veterans' housing, manufacturers have been substituting aluminum and stainless steel, and welding together substitute gauges of steel.

Replying to complaints that CPA directives were diverting too much

(Concluded on Page 17, Column 2)

Vets Can Get HH Rating
For Ranges, NHA Rules

WASHINGTON, D. C.—A veteran is entitled to an HH preference rating to obtain a gas range for installation in a house which he owns and occupies whether or not that house is built under the veterans' housing program, David L. Krooth, general counsel for the National Housing Agency, has ruled in response to a query by the NEWS.

The NEWS had been asked the following question by a subscriber who had been unable to get an answer from various local branches of federal agencies:

Is a veteran entitled to an HH priority to obtain a gas range from a retail dealer for installation in his dwelling, which may not necessarily

(Concluded on Back Page, Column 2)

ATLANTIC CITY, N. J.—Latest types of refrigeration equipment, including frozen food cabinets, will be on display at the Fifteenth Dairy Industries Exposition to be held in the Atlantic City Auditorium here Oct. 21-26.

Sponsored by the Dairy Industries Supply Association, the exposition will be held concurrently with the annual conventions of the International Association of Milk Dealers, the International Association of Ice Cream Manufacturers, the International Association of Milk Sanitarians, and the National Association of Retail Ice Cream Manufacturers.

Among the more than 250 exhibitors will be Anheuser-Busch, Inc.;

(Concluded on Back Page, Column 4)

Wilson Talk Scores
Output Bottlenecks

CHICAGO — Continuing shortages of materials are making production more difficult each day, and any further wage demands by labor will result in higher prices and pave the way for depression and unemployment, Charles E. Wilson, president of General Electric Co., declared in a speech here last week before the Economic Club of Chicago.

"There is scarcely a product we make, for the consuming public or industry, whose production is not being held up or curtailed for the lack of one or more critical materials," the G-E president said. "There is hardly a department of the company that is not faced with sending even more of its employees home for lack of material on which to work."

(Among the new shortages being manifested is that of lacquer for finishes, therefore confirming the story first carried in the Oct. 7 issue of the NEWS. Relative to this, Mr. Wilson said—)

"With no livestock reaching the market, the packers can send no fats to the soap makers; without fats the

(Concluded on Page 17, Column 1)

End of Ceilings on Appliances
In '46 Seen In Decontrol PlanIndustry Awaiting
Opening of Show In
Cleveland Oct. 29

CHICAGO—Representatives of the refrigeration, air conditioning, locker plant, and frozen food industries will start moving into Cleveland this weekend for the All-Industry Refrigeration & Air Conditioning Exposition, which opens Oct. 29 in the Cleveland Public Auditorium for a four-day run.

The Exposition, which will without doubt be the most extensive showing of industry products ever held, will attract visitors from all parts of the world. At last count, 204 firms had announced their plans to exhibit.

The All-Industry Show is open to any person who is a member of or who has any affiliation with the refrigeration, air conditioning, locker plant, or frozen food fields, it was emphasized by K. B. Thorndike, chairman of the All-Industry Show Committee.

There will be no registration charge, but all who wish to enter the exhibition halls must register and get a badge. There will be a main registration desk located near the main entrance to the Cleveland Public Auditorium, and all those who have not "pre-registered" can get their admission badges at this desk.

The show is being sponsored by the Refrigeration Equipment Manufacturers Association, comprising member companies which manufacture all types of refrigeration and air conditioning equipment; with the cooperation of the Frozen Food Locker Manufacturers and Suppliers Association.

In addition to the above associations, the following industry groups will hold meetings in Cleveland during the show week:

Refrigeration Equipment Wholesalers Association, Refrigeration Service Engineers Society, National Association of Refrigeration Contractors, National Frozen Food Locker Association.

The following are the exhibit hours announced for the show:

Tuesday, Oct. 29, 12 noon to 6 p.m.
Wednesday, Oct. 30, 12 noon to 6 p.m.

Thursday, Oct. 31, 12 noon to 10 p.m.

Friday, Nov. 1, 10 a.m. to 4 p.m.
Speaker for the joint REMA-REWA luncheon Monday, Oct. 28, will be C. T. Burg, vice president in charge of sales of the Iron Fireman Co., it was announced last week by R. Kennedy Hanson, executive secretary of R.E.M.A. He will talk on "The Three Bogies."

Among the new exhibitors added within the last week are Emery Thompson Machine & Supply Co., New York City; Fleetwood-Airflow, Inc., Wilkes-Barre, Pa.; and The Weaver Trailer Co., Inc., Cleveland.

Iron, Steel Product Resale
Price Violations Rise

WASHINGTON, D. C.—Widespread violation of ceiling prices in resales of iron and steel products have been uncovered recently, the OPA reported Oct. 14.

In Detroit alone, suits totaling more than \$300,000 have been filed against resellers who allegedly added finder's fees to their selling prices or otherwise required buyers to pay over-ceiling prices.

Most violations have been uncovered in the sale of surplus or excess stocks, and in some cases, resellers not previously handling these prod-

(Concluded on Back Page, Column 3)

Definite Action by OPA
In Line with Truman's
Orders Still to Come

WASHINGTON, D. C.—President Truman's command to his government agencies to speed up price decontrol, announced Oct. 14 in conjunction with the ending of price controls on meats, may lift ceilings from refrigerators, ranges, machinery, and other items before the end of the year.

In conjunction with the meat proclamation, OPA Administrator Paul Porter stated that the OPA would "announce as soon as practicable the specific list of commodities on which ceilings would be retained." Commodities absent from that list would be decontrolled, he said, adding:

"Price ceilings must be retained on important commodities and services where demand is still in excess of supply."

As examples, the OPA listed household appliances, automobiles, rents, farm equipment, sugar, furniture, basic clothing items, and building materials.

However, another source said that among the items expected to be decontrolled quickly are electric and gas ranges, and vacuum cleaners.

Much could depend on how the phrase "where demand is still in excess of supply" is interpreted. A few weeks ago, the OPA attitude was that price decontrol should come "only when a customer can walk into a dealer's store and ask for any particular make and model of a refrigerator or range and get it."

But the recent announcement quite likely has changed the whole picture. Some evidence of this is contained in the fact that last week, even before the President made his speech, OPA divisional officials were reportedly scurrying around in search of jobs in private industry.

Decontrol Likely Before
New Crawford Ruling

WASHINGTON, D. C.—The new interpretation of the Crawford amendment to the price control act, granting prewar margins to appliance dealers on all items, may never be put into effect.

Reason is that prices on appliances will very likely be decontrolled before the mechanics of making the changes could go through the OPA mill.

In any event, both manufacturers and dealers are hoping that OPA won't attempt to force through its plan to permit prewar margins to only those dealers who do more than 50% of their total dollar volume in such products.

This would exclude such margins to department stores and large home furnishings stores, and would make it necessary for manufacturers to prepare and administer a dual price scale, a matter that gives them the shudders.

New Crosley Household
Box to Retail at \$236

CINCINNATI—Establishment of a retail ceiling price of \$236.75 for the Crosley model SE-947 household refrigerator has been announced by the Office of Price Administration.

When equipped with a left hand door, an additional charge of \$4.75 may be made, OPA said.

This retail ceiling price, the agency said, is equal to the average price at which the same refrigerator was sold on March 31, 1942, reduced by 3% in order to bring it in line with retail ceiling prices fixed by Maximum Price Regulation No. 598.

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Dealers See No Trade-In Problem for 1-5 Years

ST. LOUIS — Appliance retailers here feel that trade-in allowances will not become a serious problem for a period varying from one year to five years.

Radio buyers say that they expect radios to become a serious trade-in problem in about a year. Whether they will return to former trade-in allowances they do not know at this time. One buyer commented that the store during the prewar period, allowed a 10% trade-in value.

Buyers say that present markups in radios will not allow them to offer trade-in allowances.

Buyers of other major appliances commented that trade-ins on refrigerators in five years will average almost 65% of their business because of the new types of refrigerators with quick freeze units that are expected to be in mass production by that time. Buyers feel that customers will want to take advantage of this added feature and trade in their old refrigerators.

There will be a similar problem in washing machines, buyers believe, when automatic washers are plentiful which will be an estimated five years. People will want to trade in the conventional type washers for automatic.

The majority of buyers of major appliances and radios expressed the opinion that the Blue Book of Standards doesn't mean anything or that it would not be practical to minimize the trade-in problem for them when it arises.

Detroit Contractors Group Told of Supply, Labor Problems Which NARC Is Tackling

By George M. Hanning

DETROIT—"Your house is on fire" and the time to do something about it is right now, Ed S. Wright, recording secretary of the National Association of Refrigeration Contractors warned the Detroit contractors group recently.

The only effective way to do something about it is through local and national associations, he said, pointing out that a single contractor, no matter how much money he has, was only "a spot on the map" to national manufacturers.

Indicating the work that the national association can do for the contractors, he referred to a meeting that national officers had recently with representatives of Kinetic Chemical Co. concerning the present shortage of "Freon" and "Freon" containers.

Individuals Supply Backing

With the backing of and information supplied by individual contractors, the national association hopes to fight through to a satisfactory solution of the problem, he declared.

Ed, as Mr. Wright insisted that he be called, went on to outline points of the ambitious program that the yearling N.A.R.C. hopes to carry out in the coming year.

"We talk softly and carry a big stick," he averred.

He revealed that the N.A.R.C. is fighting to get the refrigeration servicing trade recognized as a sepa-

rate and distinct craft, and "not the tail to anybody's kite." He said that the association's chances of success in this matter appeared good.

He pointed out the need for more sales engineers in the refrigeration contracting business and fewer mechanics. He asserted that the job of establishing a national sales training school rested squarely on the contractors themselves.

Touching on the alleged unfair trade practices of refrigeration parts and supplies wholesalers who also manufacture parts, Ed avowed that "jobbers should not be manufacturers."

"Good jobbers stay in their own backyard," he declared. "We play ball with the jobbers who play ball with us."

To contractors still doubtful of the advantages of organization, Ed posed the questions: How much does this business mean to you? What future does it hold? Do you want to be a part of it?

The refrigeration contracting business has a great future, he proclaimed, quoting freely from predictions made in the book, *Great Day Coming*, written by George F. Taubeneck, editor and publisher of the NEWS.

Referring to Mr. Taubeneck, he said, "This man has a more thorough grasp of the problems and possibilities of this industry than any other human being—and more B.t.u.'s per pound than anyone I know."

'Worth Watching and Guarding'

"If we agree that this business is worth keeping and being a part of in the future, then we must agree that it is worth watching and guarding carefully," he emphasized.

At this same meeting the Detroit Association of Refrigeration Contractors elected a new board of directors for the coming year.

The new board consists of: John R. Lindsay of Ace Refrigeration Service, Charles E. Earl of Alpha Electric Refrigeration, Chris Milazzo of Automatic Refrigeration Service, Ben G. Hyatt of Copeland Authorized Refrigeration Service, James Terry of Dresco Refrigeration Co., John Duncan of Duncan & MacNicol, George L. Johnston of Johnston Refrigeration Construction, Cyril D. Young of Kay Refrigeration, James Perry of James Perry Refrigeration, G. C. Murphree of Refrigeration Maintenance Corp., A. C. Ellerbusch of Refrigeration Service, Inc., and Russell W. Tudhope of Russell Tudhope.

OPA Sets Ceilings on 2 Packaged Pureaire Kitchens

DETROIT—Two models of packaged Pureaire Kitchens manufactured by The Parsons Co. here will retail at maximum prices of \$390 and \$420, according to OPA Order 805, recently issued under MPR 591.

Following are the ceilings authorized by the order:

	On sales to—		
	Distrib-	Deal-	Con-
	utors	ers	sumers
Model P-1200	\$195	\$234	\$390
Model P-1260	210	252	420

Private, One-Appliance Displays May Increase Dealer Sales Success

SAN JOSE, Calif.—Appliance dealers who show every appliance in one heterogeneous mass in a single large showroom are making a mistake, in the opinion of Victor Silva, head of Gordon & Silva, large appliance dealership here.

"When selling gets tougher, the ability to closet off a prospect in a room which shows only the appliance he is interested in will count heavily," Mr. Silva indicated. "We're already getting proof of that in the way customers are reacting today. Appliance merchandising is going to require a lot of concentration, which can't be accomplished if everything is shown simultaneously."

Therefore, the Gordon & Silva store, located on San Fernando Ave. here, is currently finishing up a series of five small individual showrooms, each of which will be devoted entirely to a single appliance. Each of these will radiate out like the spokes of a wheel from a large central showroom just inside the store display windows.

"We'll operate under the greater system," Mr. Silva said, "whereby every prospect, as he enters drawn by the samples on display in the main showroom, will be courteously greeted, and the merchandise interested in ascertained. Thereafter, the customer will be routed directly to the proper showroom and the specialist in that line put on the job. We don't give him time to be distracted by other appliances on display."

Each of the new appliance showrooms is small, but large enough to show everything related to that appliance—such as five lines of refrigerators side by side, with all accessories such as shelving, refrigerator glassware, etc., convenient at hand. Every room is furnished with comfortable lounges, has a rug on the floor, lamps, and telephone convenience. Most important, it is shut off from the other rooms.

Mr. Silva believes that this privacy is absolutely essential for several reasons. First, if the customer is a little doubtful about which refrigerator is best for him, it is simple for the salesman to open up the next box and point out its features on a comparative basis. Presence of several makes also impresses upon the customer that the store isn't bound to sing the praises of a single manufacturer—important in these days when customers are still mindful of "ersatz" merchandise.

Second, the store remembers that many people are embarrassed or nervous talking payments or financing out in the open where other people may overhear.

"The man whose income is small and who must budget so much a month for appliance purchasing doesn't enjoy talking about it in public," Mr. Silva indicated.

Lastly, being closeted with a salesman in a private area means more sales per prospect.

"If the customer is out on the open floor, with interruptions, distractions, etc., he can quite easily become frightened and walk out with a hasty excuse," he pointed out. "Whereas if the same customer is seated in comfort, behind closed doors, he is far less likely to leave."



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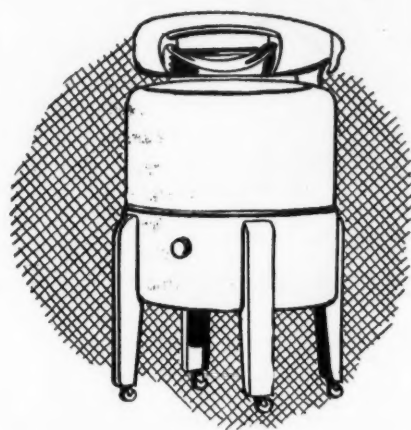
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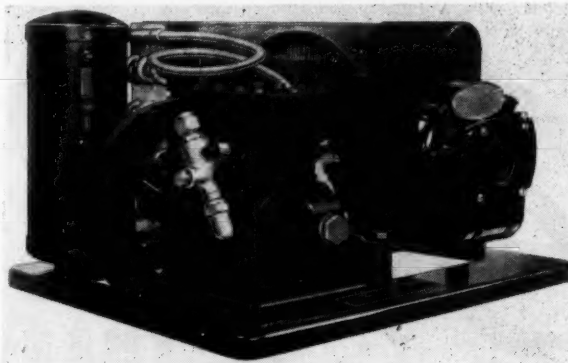
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Jack & Heintz Open Type Condensing Unit

Already producing hermetic type condensing units, Jack & Heintz of Cleveland is preparing to begin manufacture of this open unit before the first of the year. It will be made in $\frac{1}{4}$ and $\frac{1}{2}$ hp. sizes.



Super-Cold Corp. to Build \$18,000 Factory Addition

LOS ANGELES—The Super-Cold Corp., of 1020 East Fifty-ninth St., Los Angeles, has obtained a building permit for construction of a new factory building at 850 East One Hundred and Eleventh St. It will be 60 x 100 ft. and cost \$18,000.

Jack & Heintz Plans Production of Open Units Before Jan. 1

CLEVELAND—Production on its new, open type, $\frac{1}{4}$ and $\frac{1}{2}$ -hp. condensing units is scheduled to begin before the first of the year, Jack & Heintz Precision Industries, Inc., has announced.

Both this open type condensing unit and the hermetic compressor announced last July will be displayed for the first time at the All-Industry Refrigeration and Air Conditioning Exhibition here Oct. 29 to Nov. 1, the company said.

Production tooling for the hermetic compressor, which is said to weigh approximately $\frac{1}{3}$ as much as conventional models, is progressing satisfactorily, according to the company. The compressor is reportedly designed for use in home refrigerators.

Shortage of 'Freon' Remains a 'Mystery'

(Concluded from Page 1, Column 3)

"This shows," Mr. Thompson commented, "that either empty cylinders are not being returned promptly or there is considerable 'Freon-12' in the field and, in my opinion, it is some of each."

Here are some other details about the "Freon" situation that may perhaps shed some light on the "mystery":

Early in September Kinetic Chemicals received a communication from Orville W. Brown, an official of the Miami chapter of the Refrigeration Service Engineers Society, claiming that "Freon-12" was available only from "black market operators" at greatly inflated prices. W. W. Rhodes, sales director, made the following reply:

"Freon-12" has a definite and established ceiling for each class of trade. We published our ceiling prices soon after the formation of OPA and neither our prices nor the ceilings have to our knowledge ever been increased. We have never made any application for increase of ceilings and all of our contacts with OPA have been of a cooperative and pleasant nature as their Washington file will indicate.

"Let us explain our sales setup. We manufacture 'Freon-12,' but it is sold on an outright sales basis to 26 national distributors who have sales organizations covering the United States. These national distributors comprise those who make a specialty of selling refrigerant gases nationally and many of the organizations who manufacture and sell refrigerating machinery.

"We have no control over these national distributors but we do know from their orders that they sell to jobbers, sometimes called wholesalers, and in the case of the refrigeration manufacturers through branches and local distributors.

"The national distributors for 'Freon-12' are all high class organizations, and we do not believe that any of them are guilty of selling at over-ceiling prices. No 'Freon-12' is sold except to these organizations and to manufacturers who use it in equipment of their manufacture, and again we are reasonably certain of the character of this group.

"Therefore, it must be that those whom you term legitimate jobbers

and wholesalers in your district have unwittingly, or unconsciously sold the 'Freon-12' to those who are now using our product to obtain an illegal profit.

"The demand from spring onward has been unprecedented and our plants have produced more than ever before. We have shipped much more 'Freon-12' for use in servicing refrigerating machinery to the field than ever before in a like period.

"It is our thought that the amount of 'Freon-12' that we have shipped would have adequately taken care of the necessities of the United States if it had been properly distributed. However, we have no doubt that because jobbers' and dealers' stocks have been very low there has been a great deal of selfishly reaching for the supply and, as a consequence, black market operations in some territories may have been commenced as you allege in your letter."

During a conference with Kinetic officials with officers of the N.A.R.C. it came out that early this past spring, the "Freon" warehouses throughout the country were so "severely" raided that stocks were almost exhausted, and some 100,000 cylinders were tied up.

Some of this "raiding," it is believed, was done by large users of the refrigerant, such as theaters.

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The ceiling type Chillator delivers a slow moving horizontal flow of high humidity air to all corners of the cooler, and is backed by knowledge and application of the famous McQuay Down Flow unit heater. The Chillator unit is desirable in low ceiling walk-in coolers because of its shallow height.

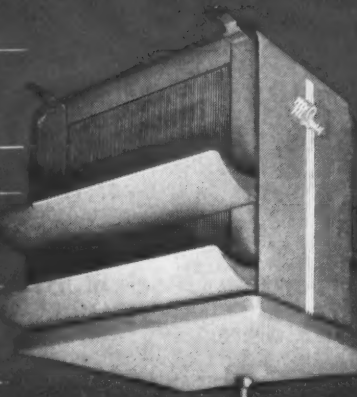
The wall type Chillator is excellent for reach-in and certain types of walk-in coolers.

These units, together with the Standard and Junior unit coolers plus McQuay dependable refrigeration coils, give you everything needed for any commercial refrigeration application. All have the exclusive McQuay Ripple Fin coil construction—proved and preferred by users everywhere . . . McQuay, Inc., 1607 Broadway Street, N. E., Minneapolis 13, Minnesota.



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NEW CHILLATOR UNIT COOLER
PANEL TYPE



NEW JUNIOR UNIT COOLER



NEW STANDARD UNIT COOLER

All this IN ONE DFN CARTRIDGE!



... means
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The DFN system gives you a three-way weapon against moisture, sediment and acid—saves you servicing time and prevents expensive "make-good" call backs due to freeze-ups, stuck valves and clogged system. The very compactness and completeness of the DFN cartridge makes it also the easiest to replace. For this cartridge is quickly inserted in the DFN shell without fuss, muss or loss of dehydrating strength.

The DFN cartridge stays on the line longer because it is quality-built throughout. The drying agent is thoroughly reactivated, her-

metically sealed and mechanically packed to provide complete dispersion of the refrigerant. Multiple layers of bronze wool, wool felt and strainer hold more sediment without pressure drop, and filter to minute size. Ask your distributor or write us for catalog R-7. McIntire Connector Co., 261 Jefferson St., Newark 5, N. J.

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FILTERS • NEUTRALIZERS

Admiral Replacement Condensing Unit RA 211 Set to Retail at \$63

WASHINGTON, D. C. — Ceiling prices on Admiral Corp.'s model RA 211 refrigeration replacement unit for use in refrigerator models CS746 and CS946 have been established by the Office of Price Administration.

The new price schedule follows:

Class of Purchaser	Ceiling Price (each)
Wholesale distributors	\$48.30
Retail dealers	\$57.75
Ultimate consumers	\$63.00

These prices include a four year replacement contract and full freight allowances from factory to distributor to dealer to ultimate consumer and return freight for the defective unit, OPA asserted.

Labor costs for installation in the consumer's refrigerator are not included, OPA added.

Any seller, the agency said, could charge the purchaser a \$15 deposit until the defective unit was returned. When that unit is surrendered, the deposit must be repaid in full.

In an opinion accompanying the order, No. 680 to RMPR 136, the agency asserted that it had established these prices after disapproving Admiral's proposed ceilings as allowing too great a markup.

WAA Consigns Building Surplus to Vet Housing

WASHINGTON, D. C. — Virtually all the government's war surplus building materials, including plumbing and heating equipment, will be made available for the veterans' housing program before Dec. 1, the War Assets Administration has announced.

Such property, the agency said, will be held 10 days to give the Federal Public Housing Authority and the Veterans Administration a chance to obtain it. Then it will be sold only to HH and MM certifiers upon direction from the Housing Expediter or the Civilian Production Administration, respectively.

In case there is more than enough property to fill the rated orders, the remainder will be sold to lesser priority and non-priority buyers, the WAA said.

4 More Firms Announce New Products To Be Exhibited During All-Industry Show

American Refrigerator & Machine

MINNEAPOLIS — The new 1947 model 8-cu. ft. home freezer manufactured by American Refrigerator & Machine, Inc. here, will make its debut at the All-Industry Refrigeration and Air Conditioning Exhibition in Cleveland Oct. 29 to Nov. 1, E. H. White, chief engineer, has announced.

In addition, the company plans to display its present 8 and 15-cu. ft. model home and farm freezers, a new center aisle type store freezer or frozen foods dispenser, and a new self-contained bottle beverage cooler unit, Mr. White said.

R. W. Dreher, president and general manager, will lead American's delegation to the Exhibition. Accompanying him will be J. V. Hartman, R. L. Honey, R. E. Yale, and Mr. White.

Kramer-Trenton Co.

TRENTON, N. J. — Operation of the Kramer-Trenton Co.'s "Thermobank" system for automatic defrosting for low temperature installations will be demonstrated at the All-Industry Show by a working model, the company has announced.

At its booth, the company also plans to exhibit its Curvette unit cooler for use in beverage counters, food chests, reach-in refrigerators, and other fixtures; its radial unit for discharging cold air into a refrigerator; and its panel unit for use in reach-in refrigerators.

Representing the firm at the exposition will be Israel Kramer, Harry Klingler, S. Charles Segal, and Frank Obert.

Bundy Tubing Co.

DETROIT — Bundy Tubing Co. has completed plans for its exhibit at the All-Industry Refrigeration & Air Conditioning Exposition in Cleveland, and will feature a specially lighted display cabinet which will demonstrate how Bundyweld steel tubing is produced, and which will also show samples of the various types of tubing that the company manufactures.

To be shown for the first time in

the Bundy exhibit will be Bundyweld Monel and 'L' Nickel tubing, which have special applications in the refrigeration field.

Rounding out the exhibit will be displays of tubing parts, assemblies used in the refrigeration field, and various types of refrigeration condensers.

The following personnel from Bundy's home office will be in attendance at the exhibit:

G. D. Baker, vice president and director of sales; P. A. O'Connell, sales manager; and J. A. Dugan, sales department.

Marlo Coil Co.

ST. LOUIS — Marlo Coil Co. will exhibit new improved units of post-war heat transfer equipment at the All-Industry Exposition.

The recently-announced Marlo Cooling Tower Unit will be featured, together with a modern streamlined "Turbo-Flo" wall-type panel cooler and a new type of ceiling unit coolers equipped with Venturi fan rings, integral heat exchangers and thermal valves.

A compact new bulletin which illustrates and briefly describes the complete Marlo Line will be distributed at the booth, which will be manned by:

L. C. Pellegrini and A. G. Loeffel St. Louis; H. R. Iverson, Washington, D. C.; W. C. McIntyre, San Francisco; Walter B. Moses, Jr., New Orleans; and R. C. Hollsworth, Corpus Christi, Tex.

Mobile Power Plants, Gas-Driven Generators Offered In WAA Sale

WASHINGTON, D. C. — Approximately 380 mobile power plants and 1,200 gasoline powered generators are now being offered for sale by the War Assets Administration.

Prices range from \$1,544 to \$2,263 each for the power plants and from \$894 to \$1,490 each for the generators, the agency said.

The mobile power plants consist of eight-wheel trailers in each of which is a gasoline-driven generator. Both used and unused equipment in good condition is said to be available.

Mobile power plant generators and the portable generators are 25 KVA (20 KW), 120 volt, single phase, 60 cycles.

The mobile power plants are located at Holabird Signal Depot, Baltimore. Portable generators are stocked at Baltimore, San Francisco, and Cincinnati, WAA declared.

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- Instantaneous Water and Beverage Coolers.
- Oil Separators.
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- Equalizer Tanks.
- Controlled Temperature Photographic Processing Units.
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High Dealership Mortality Predicted In Over-Expanded Appliance Market

By H. M. Kelley, Appliance Sales Manager, Frigidaire Division, General Motors Corp.

Perhaps as a basis for our discussion, we should first consider the current situation in the appliance industry. We came out of the war with an unprecedented demand for appliances of every type and kind. While it looked like reconversion of existing plants could be accomplished at a much faster rate than many believed possible, and new plants built and equipped for efficient manufacture, many things have served to greatly retard actual production.

Appliance manufacturers have had to contend with strikes within their own plants. Widespread and prolonged strikes in major industries, such as coal, steel, copper, rubber, shipping, etc., have caused critical shortages of basic materials. Work stoppages in fabricator's plants have resulted in reduced production of motors and other assemblies.

In addition, a spirit of restlessness on the part of workers—no doubt the result of wartime stress and experience—has resulted in a high turnover of labor which has slowed down production by decreasing the average output per worker.

Seller's Market May Last

As a result of all these contributing factors, appliance production today is far below the goal which manufacturers set a year ago. Furthermore, there is little to indicate that production levels can be raised sufficiently in the immediate future to make possible a quick reduction in the backlog of unfilled orders. Therefore, it is expected that the seller's market which has existed since the end of the war may be prolonged beyond normal expectations.

But let us take a more critical look at this backlog of unfilled orders. It is important for us to recognize that essentially they represent unfilled desires and not unfilled orders. Whether or not these desires will be translated into a firm demand will depend upon the degree of confidence the public will have in the future when that point has been reached. Because of this, it is easily possible that the transition from a seller's to a buyer's market may be more rapid than we would be inclined to think at this time.

In considering that transition, we should take into account the probability that all types of markets will not react in the same manner and at the same time. The rural market, for example, promises to be stable for some time to come, providing crop prices hold up. The farmer today has more cash, greater assets, and lower indebtedness than at any time in recent history.

This favorable situation for the appliance industry has been and will be further enhanced by the widespread electrification of rural areas by both private utilities and the R.E.A.

By contrast, the larger urban



HARRY M. KELLEY

markets seem to be in a more vulnerable position. Strikes continue to cut into the industrial worker's annual wage; resulting material shortages have caused intermittent lay-offs of workers in countless plants.

Consequently, some of these families probably have had to dip heavily into their wartime savings. Higher prices of food and clothing are calling for an ever larger share of the income of the salaried and industrial worker. These conditions combined with increasing prices of appliances have removed and will continue to remove many such workers from the immediate major appliance market.

All of these conditions certainly will affect the sale of appliances and since in a high percentage of families appliances are not considered immediate necessities, they are certain to feel the brunt of any type of buyer resistance.

Savings Have Dropped

There are other equally significant signs. Sales of "E" bonds have fallen off to the point where redemptions are now in excess of sales. Savings have declined from 29% to 14% of disposable income. Furthermore, a high percentage of the people are not planning to spend their accumulated savings—they intend to hold them as security against the proverbial rainy day and a constantly increasing percentage of appliance sales are being financed.

Regardless of all these factors, a seller's market is expected to continue for some time to come, but this condition will also exist in varying degrees as related to specific appliances.

In the case of refrigerators, for example, it looks like we will have a seller's market at least until the middle of 1947. However, there is much duplication in dealers' prospect lists,

prices are rising, and earnings may be reduced. Therefore, although the outlook today is quite good, the backlog of demand may be reduced so that a buyer's market in refrigerators may arrive sooner than now appears likely.

Some other appliances are already experiencing substantial buyer resistance. Many brands of table-top radios have already entered a buyer's market, with consoles following closely behind. Many brands of vacuum cleaners are in a buyer's market, and "off-brand" merchandise of many kinds is becoming difficult to move. Conventional washers seem to rank between refrigerators and table-top radios, while the true demand for automatic washers at their current prices is unproven because of a lack of sufficient offerings.

The demand for electric ranges is unusually firm, but this demand probably results from a different set of factors. The most important of these is the tremendous growth in public acceptance of the electric range during the war years, as well as a marked acceleration in the interest and promotional effort of public utilities.

The potential market for electric water heaters has greatly improved over the prewar picture. We frankly believe there is going to be good business in this field for some time to come. Here again, another set of

Quite a number of appliance dealers may become discouraged when they read the opinions of H. M. Kelley, appliance sales manager of Frigidaire Division, General Motors Corp., published on this and the following page, but AIR CONDITIONING & REFRIGERATION NEWS believes that the opinions of a most important manufacturer in the appliance field should be read by all.

In his talk, which was presented at the recent annual meeting of the International Association of Electrical Leagues in New York City, Mr. Kelley expressed the view that there are too many appliance dealers and further declared that "we believe that a very high mortality of dealers is bound to come in the not too distant future."

factors has been at work improving this market.

First of all, there is an increased appreciation on the part of the home-maker of the need for an automatic source of an adequate supply of hot water. This has been heightened by the shortage of domestic help which has caused many homemakers to personally handle many more household tasks. Increased wartime income has created a large market among families who thought they could not afford an automatic water heater, and so contented themselves with make-shift water heating methods for economic reasons.

Water Heater Market Up

While the water heater market was very spotty before the war, it is rapidly becoming national in scope. Utilities all over the country either have made, or are making, special rates for water heating service, as well as planning to assist in installation expense.

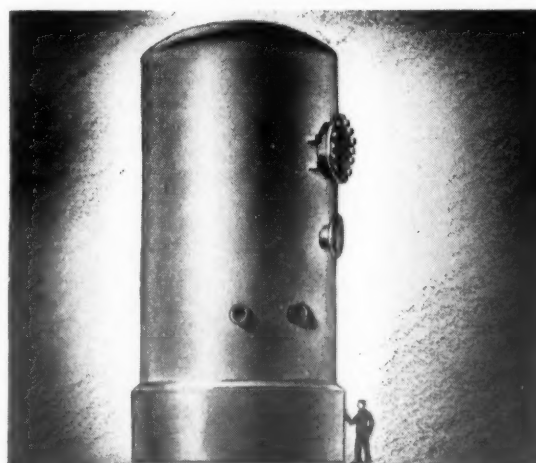
Most utilities are going "all-out" on the promotion of the electric water heater as a load builder. The increased interest of the utilities in

both electric ranges and water heaters in many cases seems to arise from the need to off-set the loss of wartime industrial load, plus a better appreciation of the desirability and stability of the range and water heating load.

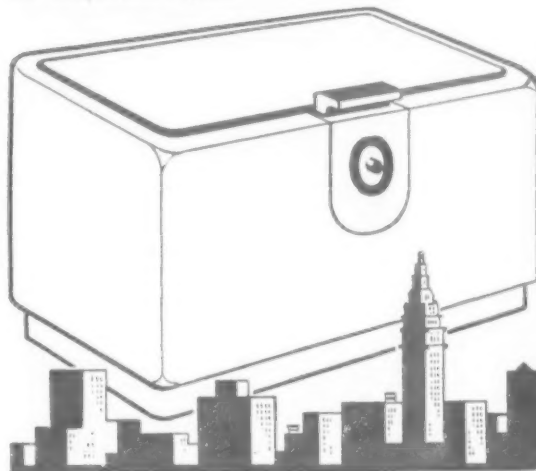
Just in passing, I would like to point out that one of the most constructive steps that utilities could take in promoting the sale of electric water heaters would be to standardize their regulations regarding permissible wattages, and other factors governing the installation and operation of water heaters, thereby reducing the production and installation costs of this appliance.

Still another factor, which we believe will affect the water heater market is the automatic washer. The hot water requirements of this appliance are such that an automatic water heater will contribute greatly to the satisfactory operation of the washer. Consequently, automatic washer sales will create a new demand for electric water heaters, and a desire for larger water heaters among present users.

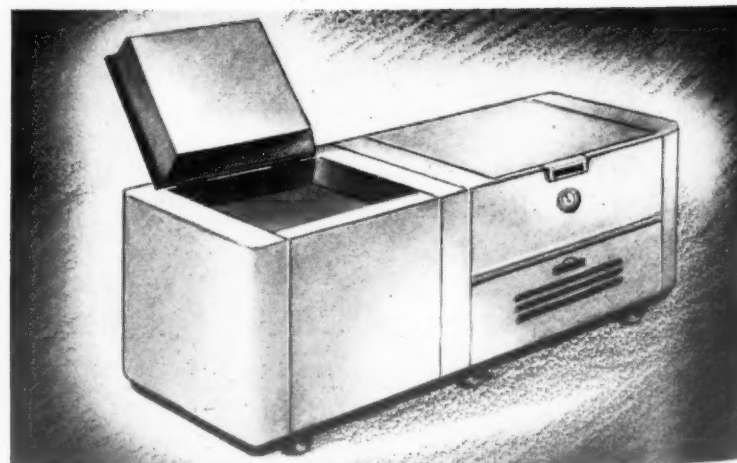
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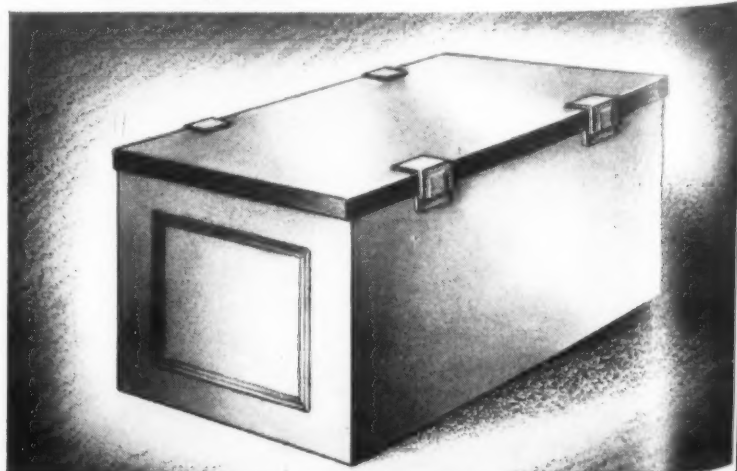
Methyl chloride storage tank 40' high, 12' diameter operating at -219°F. now being erected by the Guardite Corporation, Chicago, Illinois. Santocel's superior insulating efficiency cuts thickness of insulation, reduces area of radiation and opportunity for temperature gain.



THE BIGGEST THING IN CLEVELAND—OCTOBER 29-NOVEMBER 1—By all means see Monsanto's Santocel exhibit, showing applications of Santocel in outstanding commercial and industrial units, at the "All-Industry Refrigeration and Air Conditioning Exposition," Cleveland, O., October 29 through November 1. Bring your ideas, bring your questions.



Industrial freezing unit for shrink-fitting of metal parts. Requirement: -150°F. Manufactured by Bowser, Inc., Terryville, Conn., with Santocel insulation. Santocel is unexcelled in this type of industrial application where temperature differential is wide and critical, and where large capacity with minimum overall dimensions is important.



Insulated shipping container for rail or truck shipment of frozen foods... safe for 72 hours with only 20 pounds of dry ice. Manufactured by New England Box Co., Greenfield, Massachusetts. Shippers today can step up the pay-load, reduce the dead weight with Santocel for insulation in all types of transportation... for air, rail, ship or truck.

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"ADVANCED" REFRIGERATION COMPRESSOR

Features: Separate cylinder block, double-throw eccentric, bronze connecting rods, Crane Shaft seal, simplified valve design, disc-type suction valves in top of cylinder block, reed discharge valves. Large volume crankcase prevents oil "boiling off."

Shipments scheduled upon receipt of firm purchase orders. For specifications, prices, deliveries and other information, write:

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THE COMPRESSOR YOU CAN DEPEND ON

Manufacturers and Electrical Leagues Can Help Dealers Survive, Says Kelley

(Concluded from preceding page)

And now, let us turn to another appliance—one which many have considered the "white-haired boy" of the appliance business—the home freezer. Certainly there is a wide difference of opinion regarding its potentialities. Estimates of sales have run all the way from 300,000 to over two million units per year. We believe that this market has been greatly over-estimated, with the result that we have far too many producers, as well as retailers, and we predict sizable casualties in this field.

Our information would indicate that this product is already well into a buyer's market. In justifying our conservative appraisal of the home freezer market, and our contention that its potentialities have been greatly over-estimated, let us consider only two pertinent points.

First, in the urban market, the home freezer is primarily a convenience, and therefore, a luxury item, and in most cases it cannot be sold on a "pays for itself" basis. Our experience has indicated that you cannot build a volume market for a major appliance on a luxury basis.

Furthermore, we believe that such things as greater availability of frozen foods, rented home freezers, the locker plant and greater frozen storage space in household refrigerators will all have a depressing effect upon home freezer sales in the urban market.

Secondly, in the farm market where the purchase of a home freezer can

be justified on economic grounds, the market has been over-sold as to the capacity needed. We hear much about the 20-cu. ft. frozen food capacity requirement of the farmer. We agree with the requirement of 4 to 5-cu. ft. per person, but believe that this requirement for the average farmstead can be met most economically through the use of say about an 8-cu. ft. home freezer on the farm supplemented by the necessary locker space.

Home Freezer 'Intermediate'

We recommend that the average farmer use a medium sized home freezer as processing equipment for smaller lots of food, and as intermediate storage between harvest and the locker plant, and between the locker and the farm table. We certainly advocate that the average farmer take full advantage of the services afforded by the locker plant in the processing of meat.

And now returning to consideration of the over-all appliance market, let us review some other factors which can serve in estimating demand and evaluating sales trends.

Sales trends in a market often cast their shadows far ahead of their time. Major appliances, normally being items which are sold on time payments to a large degree, are particularly susceptible to buyer influence considerably ahead of the time when buyer's resistance is perhaps felt in other types of consumer non-durable merchandise—products of a

more expendable or subsistence nature.

However, today with a high percentage of cash sales as compared with normal times, and with time payments limited to 12 months, we are not in as good a position to evaluate the buying public's confidence in its ability to pay in the more distant future. Relaxation of Regulation W, of course, promises additional potential for major appliances and, at the same time, will provide conditions which will more accurately reflect the confidence of the buying public in the future economic conditions of the country.

We all know that even in normal times, a marked change in buying habits or a slowing down of sales has a far reaching effect on dealer welfare and profit possibilities. But today we are faced with a new situation which in time may become very serious in its effects upon our industry. We refer to the tremendous increase in the number of major appliance retail outlets.

There are a number of factors which have contributed to this over-expansion in the number of appliance dealers. For example, the tremendous accumulated demand for appliances has been widely heralded. Entrance into the appliance business is probably easier than most any other type of retailing. It is an accepted fact that the appliance industry weathered the last depression better than most any other hard goods line.

Among the millions of returned veterans, there are literally thousands having that ever-blooming desire to go into business for themselves. Many of these returned veterans, and others without experience in the appliance business, have put their savings into appliance stores and many

have gone into business largely on borrowed capital. Some of these thousands of new appliance dealers will weather the storm ahead, but we believe a high percentage of them are in for a bad time.

Let us consider just how serious the situation really is. Prewar, there were in the United States about 25,000 major appliance dealers and 25 million wired homes, or about one dealer for every 1,000 wired homes. From this prewar experience, a rule of thumb was evolved that a major appliance dealer needed a minimum of 1,000 families to exist.

Best estimates today indicate there are between 50,000 and 60,000 major appliance dealers and this does not include many chain stores who have expressed a desire to get into the appliance business when they can get good lines.

One Dealer for 435 Meters

A recent check of several markets indicates there is now a major appliance dealer for every 475 metropolitan meters, and one for every 300 rural meters. This gives us a composite picture of only 435 meters per appliance dealer, as compared with the before mentioned rule of thumb of 1,000 meters per major appliance dealer.

As a result of this tremendous increase in the number of appliance dealers, we believe that a very high mortality of dealers is bound to come in the not too distant future. It is unfortunate that we have to go through such adjustments in our business cycle, but I am sure we can all agree that such an adjustment is inevitable.

Therefore, inasmuch as we apparently cannot avoid this readjustment, we should try to do the best possible job of anticipating the situation, and taking steps that will insure the best possible end result with the dealer organization that will survive.

In other words, if we are thoroughly familiar with the possible causes of dealer failure—if we realize the pitfalls of unsound management policies and procedures—we will be in a position to counsel wisely with dealers during the critical days ahead.

Other Contributing Factors

Many of the factors pointing to the inevitable dealer mortality which we will experience are rather obvious. Yet, there are some contributing factors that may not be readily evident to those without years of experience in the art of major appliance merchandising.

So let us briefly look at some of the more important factors that will contribute to dealer mortality, such as—

Lack of capital. Many appliance dealerships have been started on the proverbial "shoe-string," and without sufficient cash or available credit, they cannot be expected to survive when the going gets rough.

Inability to secure franchise of brand name products that will have consumer acceptance in a buyer's market.

Poor store locations. In the highly competitive days ahead, the attractiveness and location of the dealer's store will play a large part in his success or failure.

Inexperience in major appliance merchandising which may result in a disregard for the very fundamentals of successful appliance merchandising.

Failure of the manufacturer and

the wholesaler to guide the dealer properly through sound counsel and advice.

Inequity of the manufacturer's dealer policy.

Poor service. Due to lack of experience, the dealer may not attach proper importance to the part good customer service plays in successful appliance merchandising. As a result, he may also find himself with service obligations to his users on merchandise of poor design or construction that cannot be kept operating satisfactorily.

Inability of the dealer to handle trade-ins on a sound basis and successfully merchandise used appliances. Since an increasing proportion of all major appliance sales, particularly refrigerators, will represent replacements, and if the dealer is unable to handle the replacement market on a profitable basis, he will have little chance of success.

Lack of aggressiveness and initiative necessary to cope with the sales problems of a normal market. And every dealer should realize that a normal market is a buyer's market. Whatever success a dealer may enjoy during the present, short-lived seller's market is no guarantee of success when tough, competitive selling again becomes the rule.

Other causes of failure could be added to this list, but probably these include most of the more important factors that will contribute to dealer mortality in the period ahead. When this dealer mortality reaches its peak, we can expect a most chaotic condition with all the evils usually associated with dumping, such as price cutting and chiseling of every kind.

Period of Price Cutting

If a dealer is to steer his operation through this dangerous period successfully, he must recognize the basic fact that every major appliance that is built will be sold to someone at some price. It will find its place in some user's home. Even the poorest of these appliances can be expected to give a few years of service during which time that homemaker will be out of the market.

When price cutting has started, it will call for careful sales management on the part of the ambitious, aggressive dealer who expects to succeed and maintain a permanent business. If he tries to meet price cutting with price cutting, it will spell his downfall.

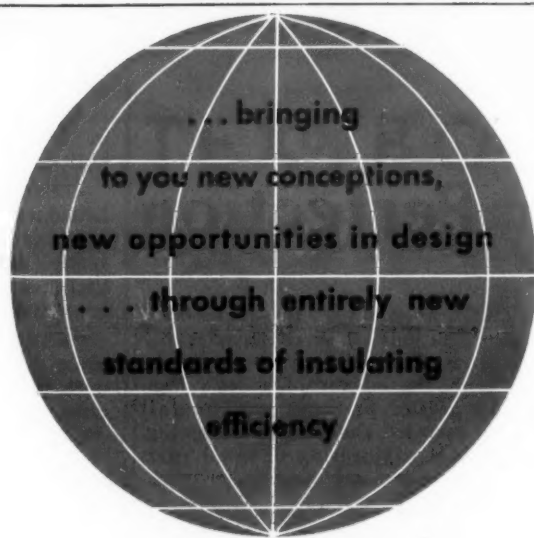
No dealer who is to survive can hope to meet the cut prices of a dealer who is forced to liquidate his inventory. Because no matter how far he may go in meeting the situation, the liquidating dealer still must liquidate. To push the liquidating dealer into an even greater loss will bring no benefit to the dealer who wants to survive. If he attempts to pursue such a policy, he will only jeopardize his own chance of success.

Instead of following the price cutting spiral down to his destruction, the dealer who is to survive will have to call upon every ounce of sales ability he has. He will have to train his sales organization better than ever before, and inspire and drive his sales force toward the greatest sales effort that has been put forth in this business in many years.

Yes, the only thing a dealer who wants to survive can do is to sell. Sell his brand; sell against the future orphan brand; sell his products' features; sell his service, his integrity, and his business stability.

SANTOCCEL

THE CHEMICAL INSULATION



Already those manufacturers who have put this unique silica aerogel, Santocel, to work have delivered amazing results in new efficiency and design. Santocel, "the world's best insulating material," makes it possible to cut thickness of walls and doors of refrigeration equipment in half . . . give 40%-60% (sometimes even more) added storage capacity!

Progress Note

Monsanto's continuing research has added new advantages: a product half the weight of the original material, delivering equal insulating efficiency at almost half the former cost per cubic foot.

Not merely a better insulating medium . . .

Santocel offers the opportunity of completely new conceptions of design . . . new reduced overall measurements of equipment, new greater capacities, new integration of storage and mechanical units, new savings in weight and bulk . . . all within new, reasonable cost limits.

New Opportunities

If you haven't investigated the opportunities for you in Santocel before, here is a new, compelling reason to do so at once. Whether you make or use refrigerating equipment, it's now time you figured your savings, your sales advantages, your profit potentials by re-designing with Santocel as your insulation medium.

Already Santocel has demonstrated its usefulness in commercial, industrial, and domestic "cold" equipment, including the following:

1. Domestic refrigerators with 40-80% more storage space . . . same outside dimensions
2. Home and farm zero storage units with 50-100% more capacity
3. Insulated tank trucks for liquid oxygen
4. Insulated railroad tank cars
5. Insulated shipping containers
6. Industrial freezing units (—150°F.) for shrink-fitting metal parts
7. Insulated 1-2 gallon bottles for hot liquids
8. Insulated storage tanks for liquid oxygen, methyl chloride, etc.
9. Cold test instrument cabinets (—50°F.)
10. Insulated equipment for air transport of blood plasma

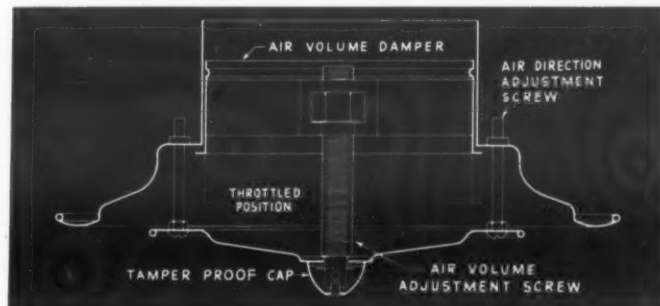
For full details, samples or technical counsel, write, wire or phone: MONSANTO CHEMICAL COMPANY, Merrimac Division, Boston 49, Mass.

How does SANTOCCEL achieve its Unprecedented insulating efficiency?

Santocel is actually 90% air, trapped in spaces about one-millionth of an inch in diameter. Molecules of air may travel with the same rapidity as in "free air" but the distance they travel between collisions with other molecules or retaining walls is substantially shortened . . . with consequent substantial reduction in heat conductivity. Now, by a new process of manufacture, Santocel has been made still lighter in weight . . . using less pounds to achieve the same insulating results.



Santocel: Reg. U. S. Pat. Off.



All the advantages of draftless air diffusion . . . plus FAST SYSTEM BALANCING AIR PATTERN CONTROL

because Kno-Draft Air Diffusers are adjustable

Volume Damper for fast system balancing regulates the air outlet aperture uniformly without affecting the outlet velocity or diffusion pattern.

Air Direction Adjustment affords any angle of air discharge from vertical to horizontal to accommodate ceiling height, individual, seasonal, or air pattern requirements.

Specify Kno-Draft Diffusers for better mixing control of room and supply air, more uniform temperatures throughout the occupied zone and noiseless, draftless air distribution.

Send for FREE handbook containing sketches, charts, dimension prints and instructive text that simplify the selection and installation of air diffusers. For your copy, please write Dept. A3 using your company letterhead.

W. B. CONNOR ENGINEERING CORP.
AIR DIFFUSION AIR PURIFICATION AIR RECOVERY

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IN CANADA: Douglas Engineering Co., Ltd., 1405 Bishop St., Montreal 25, P. Q.

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

that it was unsatisfactory because of improper packaging or freezing or something, not just because it was frozen. She's not having any.

But this, George, is what really makes me mad. You see, you can buy a package of frozen food with a reliable brand name, take it home and prepare it according to directions, and still be sadly disappointed, just because the store-keeper from whom you bought it (who has no excuse for not knowing how to handle his own merchandise) didn't take proper care of it before it reached you. This is the thing that seems to me most important to everyone connected with the industry. When you are trying out something new, you need to pick only one lemon to be permanently prejudiced.

I remember last year the freezer cabinet in a bigish store near here went on the blink. That of course can happen to anybody, and I don't need to tell you about the service situation. What I objected to was this: the manager piled all his frozen food into his dairy case, until that was an ungodly mess of leaked juices and squashed packages; then, when his cold cabinet was repaired, he chucked everything back in and froze it up again and sold it.

Nobody likes to take a dead loss, but I can't help thinking that the customers who bought that stuff are

going to need a lot of re-selling on the whole idea of frozen food, and may represent a greater ultimate loss of potential sales anyway.

That case is pretty extreme, but all too frequently I see cartons of frozen packages dumped out in the general vicinity of the cold case, waiting for someone to get around to putting them away—which may take all morning, and some of the packages get pretty soft.

Another store I sometimes visit makes a practice of gathering up any produce on which it seems overstocked, packing it in ordinary brown paper bags, stapled at the top, and dropping them in the freezer till they are nice and hard—then featuring them as 'our own' frozen food. How good an advertisement this is for the frozen food business I leave you to judge.

These are all sort of little, individual things, I realize; but multiply them over the country and they surely make a difference to the whole frozen food industry; particularly, I repeat, because they are so unnecessary and result chiefly from lack of proper information.

It seems to me that the further education of the public to prevent such incidents as these should be the concern of the whole industry. The womenfolk may be a tough proposition to tell anything to, I suppose; but as to the retailers, "why doesn't somebody DO something!"

REBECCA S. MERICLE

Business Must Awaken

And here's another letter which contains some meaty thinking:

Baker Ice Machine Co., Inc.
Omaha, Neb.

Editor:

My patient and long-suffering secretary has just cringed in terror. I have informed her that I intend to dictate a diatribe on the state of the nation and its ills, together with an appeal to you to continue to preach the crusade to awaken our business, encourage it to rise in its wrath and take back our government (it is our government) from the crystal gazers, astrologers and other bird-brained, mice-minded zanies, who invaded Washington when the first New Deal took over and have floated from one Utopian dream of the economic planners to another ever since.

True, there have been some really capable men in Washington, but they have eventually gagged on the policy of "if you can't convince them, confuse them," and have returned to their businesses, sadder and wiser, cursing the day they ever left the comparatively easy slugging matches of competitive business for the brass knuckle, black-jack, kicking, slugging alley brawls they got into in their encounters with the "practitioners of the pseudo-sciences."

Well, George, my secretary is getting nervous. I have been through all this several times. The net of what I am trying to say is that you are doing a magnificent job in your editorial columns. I feel that your "What's the Matter with America?" and your letter to Rev. Gilmartin are classics. Those things take effort—brain sweat. They represent "the little bit extra."

You could go on editing your very fine trade paper, writing innocuous

little editorials, calling attention to the great strides our industry is making and other incidental things, but you have deliberately chosen to move into the lists. It takes a lot of courage to do that and I admire you very much for the stand you are taking.

The trouble with all of us is that we are too prone to follow the easy way—the beaten path. That's the trouble with our country today. Everyone is trying to follow the easy way. There have been and still are being written hundreds of thousands of words on production and reconversion. There are no insurmountable problems. The main problem is that the great volume of workers just cannot give "that little bit extra."

They have been propagandized into feeling sorry for themselves that they even have to work a few hours a day. Everywhere I go and talk to men who are concerned with our industry, I find the same answer. "We have spent hundreds of thousands of dollars on modern machine tools and new tooling, but all we have done is catch up to the lack of efficiency in our force from prewar."

I think you will remember Jim Mangan, the brilliant former Advertising Manager of Mills Industries. Jim wrote a book, in fact he has written several, and in this particular book, he wrote a piece called, "LITTLE MEN." If ever a collection of words outlined the root of our troubles better, I have not had the pleasure of reading them. We need more BIG MEN—more men who are willing to get off the beaten path.

I am quoting this verbatim for you, as Jim wrote it:

"Down the corridors of the world sounds the distressed cry: 'Our big men! Where are our big men?'"

"But the trouble is not that we haven't enough big men. The real trouble is there are too many little men."

"Little men in the arts. Little men in the professions. Little men in politics. Little men in business."

"Little men with hands on the hoe. Little men with hands on the linotype. Little men with hands on the throttle. Little men, little men, everywhere little men with their little hands into everything."

"With the tick of the clock a new little man appears, another little man with a great little idea. Little men with little minds, little vision, little

ability. In their hands the little old world moulds and dusts and grows weary."

"Here and there a big man. A man who uses his mind as an instrument of thought. A man who traces all confusion to stupidity and seeks all remedy in mind. A big man, big in humility, for he's a student; quiet because he's busy. Big man with a big faith in nature who sees things only in their nature, a balanced man, a full man."

"Lo! The big man moves, speaks, acts—and 10,000 little men respond to the signal—to them the fatal signal of everlasting death: 'Stop that big man! Stop his idea!'"

"The little man cannot die, must not die, will not die! So 10,000 of him rush to plug up the leak (progress) in their dike (stagnation)."

"Were that leak allowed to grow, were progress allowed to spread, were big men given their chance, little men would be through—but little men will never be through and the leak is plugged in time."

"Oh, world, behold your awful malady, not lack of big men, but surplus of little men!"

"One big man with design in his heart, one big man of the ilk that does nine-tenths of any job by pure thought, in the crystal lake of logic, imagination, consideration, and practical life, accomplishes in a million years of trial and error. One big man who builds the first nine-tenths of the job out of THOUGHT and then watches the last one-tenth of the job become automatic, sure in result because it was sure in plan."

"Oh, no, the little men will not let this big man move. One small thought from the big man's brain may prove that a whole little man's life—in a trade, in a craft, in a stiff and guarded sphere—was spent in vain. 'He shall not pass!' cry the little legion in frantic fusion."

"But HE SHALL PASS. Big man, move forward! Should the lion take any account of the grasshopper? Spread out your majestic thought to a progress hungry world! Be big! Take the helm!"

"Sound the war cry! Light the torch! Down, down, down—back, back, back—over, over, over, with all little men, little men, little, little, little men!"

STERLING F. SMITH

Prospecting for Perfection

ONCE upon a time the engineering operations of small parts manufacturers was relatively unimportant. But with the advent of today's high speeds, greater pressures and overall power increase, the proper designing, testing and engineering of small parts is a very important operation.

Here at Weatherhead we maintain the largest staff of engineering personnel of any firm in our industry. Our 125 "prospectors for perfection" are involved in a ceaseless research program of creating, trying and testing all our products. Three typical examples of our intensive research are as follows:

1. Hot salt is sprayed on tube fittings to test their finish so that they will stand up under any corrosive substances.
2. Valves of all kinds are cycled under pressure until they actually break down so that the material and design in these valves have the highest safety factor.
3. Flexible hose assemblies are actually operated under 3,000 pounds per square inch pressure, again testing the durability of this product.

This is all part of Weatherhead's continuing program of "prospecting for perfection". These attributes are not always visible in the products you buy but when you see the familiar Weatherhead trade mark, that is your guarantee that the product so identified is the most highly developed, tested and engineered of its kind. Why accept less?



WRITE
FOR THIS
BOOK

The complete history of Weatherhead's development, testing and engineering facilities are completely explained in our new book entitled "Prospecting For Perfection". Free copy sent upon request.

ATTENTION REFRIGERATION ENGINEERS

Our Valves, Dehydrators, Strainers, Manifold Assemblies, Accessories and Fittings are illustrated and described in our new catalog. Write for your copy today.

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9 out of 10* service men prefer
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They prefer it . . . because they've proved to themselves that it GIVES BEST RESULTS!

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They get it . . . JOBBERS EVERYWHERE STOCK IT . . . in factory-charged dehydrators and for refilling!

Join the 91% who are winning complete freedom from moisture troubles. Ask for . . . and get . . . Davison Refrigeration Grade Silica Gel.

LOOK FOR THE CAN WITH THE BLUE LABEL

*According to a recent nation-wide survey, 91% of the refrigeration service men who specified a brand named Davison's.

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Progress through Chemistry

BALTIMORE-3, MD.

Be sure to visit the Davison exhibit—Booths 208 and 210—4TH ALL INDUSTRY REFRIGERATION AND AIR CONDITIONING EXPOSITION

Veterans Surprise Hotpoint by Ordering Deluxe Package Kitchens, Not Basic Units

Former GI's Prefer Kitchen with Dishwasher, Freezer, Etc., Rather Than Cheaper Package

CHICAGO — Although a basic kitchen "package" retailing at approximately \$500 has been offered to home building veterans by the Edison General Electric Appliance Co. here during the past 60 days, the average ex-GI taking advantage of the allocation ordered approximately \$1,000 worth of kitchen equipment, Ward R. Schafer, vice president in charge of sales, has announced.

The price difference is due, he said, to the veterans selecting deluxe models in refrigerators and stoves, and asking for automatic dishwashers, disposals, home freezers, and other "extra" equipment.

The basic kitchen included refrigerator, electric stove, sink, and four base-cabinets. In addition, an optional offer made possible the purchase of such appliances as a dishwasher, disposal, washing machines, ironers, clothes dryers, home freezers, and base and wall cabinets.

One thousand of the basic kitchen "packages" had been offered to war veterans across the nation by a manufacturer to "break the stalemate surrounding appliance procurement for war veteran housing."

Though this manufacturer has designed complete kitchens since the early 1930's, this allocation was the first actual sale of such "packages," a company official said. All these installations are to go into houses being constructed under the veterans housing law, he added.

Company officials are said to have been surprised at the high percentage of deluxe appliances ordered.

Mr. Schafer asserted that while present relatively high average home cost may be due to general conditions in the building industry, the "high average cost of the kitchen ordered is due entirely to the tastes and pocketbooks of the veterans, since the company had suggested a complete kitchen that could be bought for \$500."

The readiness of war veterans to buy automatic dishwashers and disposals, both high priced appliances formerly considered luxuries, was viewed by Mr. Schafer as indicating that "the young American public wants and is ready to buy the things that create the high standard of living generally predicted for postwar America."

From tabulation of veterans' orders, the company found that kitchens are somewhat larger than those generally built in immediate prewar homes. More than 600 kitchens were de-

signed by the company's kitchen planning department. More than half of the department's customers asked that eating nooks be designed into the kitchen. Approximately 10% asked for combination kitchens and home laundry rooms. Reports from 650 veterans showed an average building cost of \$9,100 for the home.

Despite plans which called for all kitchens to be installed by early October, less than half of the equipment for the 1,000 kitchens has been shipped, according to company officials.

Factors cited for the delay include time consumed in completing individual kitchen plans and submitting them to veterans' wives for approval, shortage of materials to complete the large number of metal kitchen cabinets asked for, and materials shortages hindering completion of the homes.

The company said that more than 80% of the kitchens reached the veterans through regularly established trade channels. Retail stores that specialize in kitchen planning made up 25% of this number, while department, furniture, hardware, and appliance stores sold the others.

A majority of the kitchens were paid for on conventional time-payments or bought for cash, it was said. Some retailers and builders, however, reportedly arranged to place the kitchen time-payments on the regular house mortgage.

Apex Automatic Washer Work to be Farmed Out

CLEVELAND—Because all available production facilities of the Apex Electrical Mfg. Co. are already being utilized in the manufacture of wringer type washers, vacuum cleaners, and electric ironers, the company's new automatic washing machine is being produced on a sub-contracting basis, C. G. Frantz, president, has announced.

Only final assembly and inspection of the automatics will be conducted in the Apex plant, E. C. Buchanan, operating vice president in charge of manufacturing, declared.

Motors for the new washer, however, will be made in the Apex plant at Sandusky, Ohio.

The flexibility of production on a sub-contracting basis was cited as a district advantage by Mr. Frantz.

Appliance Prices

Western Auto Washer

KANSAS CITY, Mo.—Six models of private brand washing machines sold by the Western Auto Supply Co. here have been granted adjusted retail ceiling prices by the Office of Price Administration.

The new ceiling prices are:

Model	Each
117C and 117AC	\$96.25
117CP and 117ACP	102.25
117CG and 117ACG	126.25

This change is embodied in Order No. 75 under Supplementary Order No. 133.

Firestone Vacuum Cleaner

AKRON, Ohio—Retail ceiling prices for three models of Firestone vacuum cleaners have been established by the Office of Price Administration.

They are:

Model	Each
5-F-3	\$66.75
5-F-4	60.75
5-F-5	56.25

These ceiling prices are applicable only to vacuum cleaners purchased by the Firestone Tire & Rubber Co. after Oct. 4, 1946, the OPA ruled.

Chapman Home Freezer

CORVALLIS, Ore.—Maximum net prices, f.o.b. point of shipment, for the new home freezer manufactured by the Chapman Mfg. Co. here have been established by the Office of Price Administration. They are:

Model	Distributors	Dealers	Consumers
15½ cu. ft.	\$267.50	\$321.00	\$535.00

Buffalo Dealers View New Admiral Dual-Temp

BUFFALO — The new Admiral Dual-Temp refrigerator was introduced to local dealers at a recent luncheon meeting held by Ben L. Kulick, president of Fay-San Distributors, Inc., local wholesaler of Admiral appliances.

At the meeting, Richard J. Levi, general manager of Fay-San, outlined advertising and sales plans.

"RECORD" WATER DEFROST

RECORD COILS WATER-DEFROST
CANADA PAT. 254,785 U.S. PAT. 2,219,393
REFRIGERATION ENGINEERING INC.
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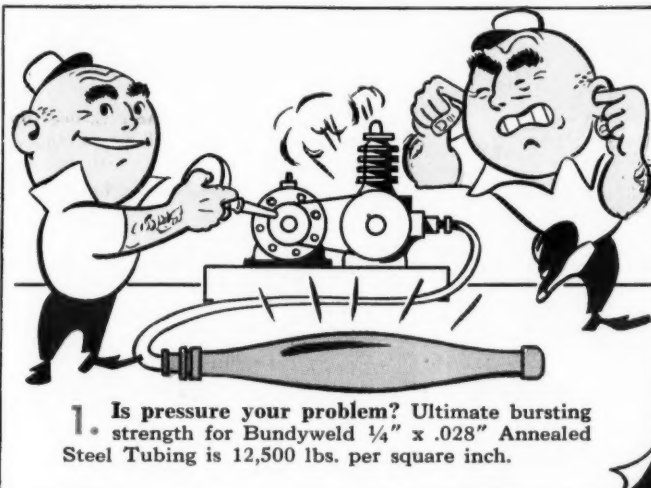


See the new
COOLSTREAM
ELECTRIC WATER COOLERS

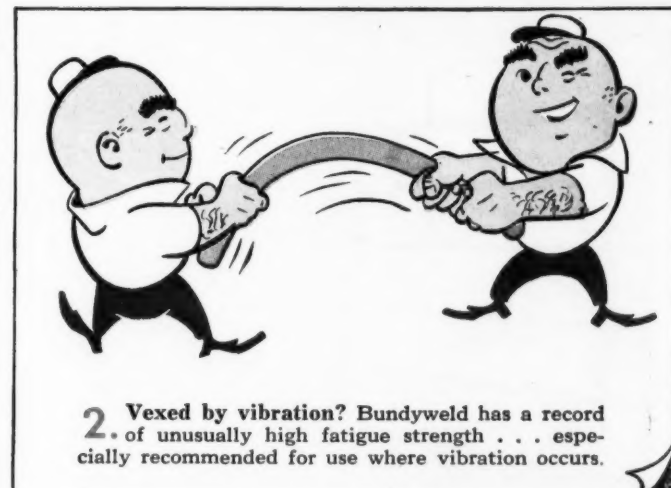
at the Exposition
Booth 303
Cleveland Auditorium

THE **COOLSTREAM**
CORPORATION
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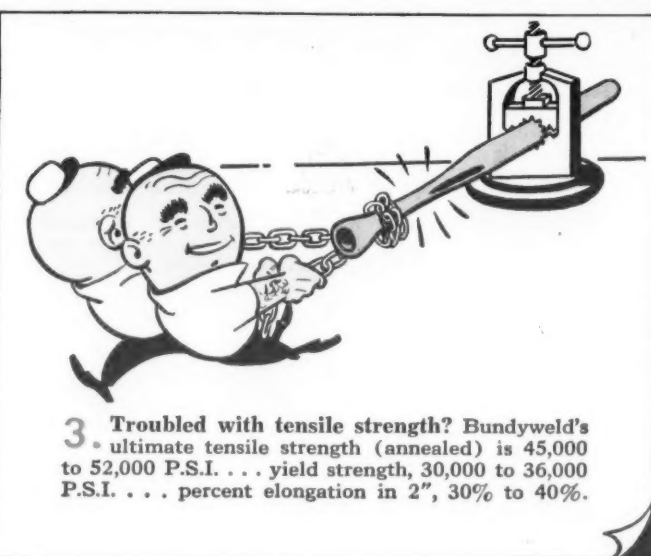
Four pages from Bundyweld's TEXTBOOK ON TOUGHNESS



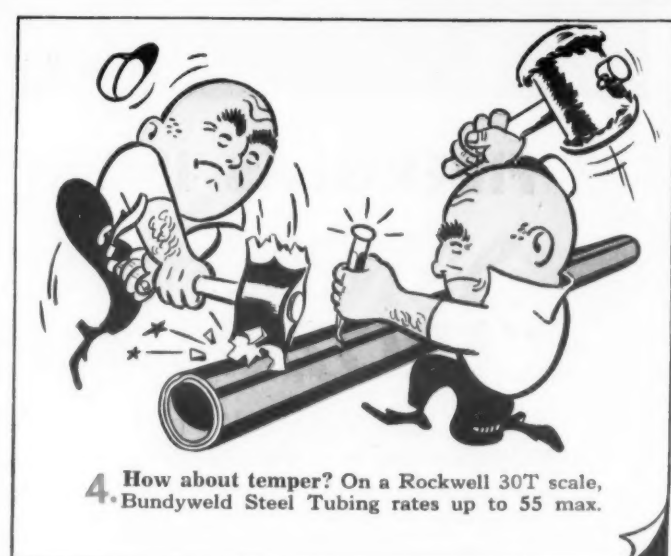
1. Is pressure your problem? Ultimate bursting strength for Bundyweld ¼" x .028" Annealed Steel Tubing is 12,500 lbs. per square inch.



2. Vexed by vibration? Bundyweld has a record of unusually high fatigue strength... especially recommended for use where vibration occurs.



3. Troubled with tensile strength? Bundyweld's ultimate tensile strength (annealed) is 45,000 to 52,000 P.S.I. ... yield strength, 30,000 to 36,000 P.S.I. ... percent elongation in 2", 30% to 40%.



4. How about temper? On a Rockwell 30T scale, Bundyweld Steel Tubing rates up to 55 max.

HOW BUNDYWELD IS MADE



Bundyweld Tubing is made by a process entirely different from that used in making other tubing. A single strip of copper-coated S.A.E. 1010 steel is continuously rolled twice laterally...

... into tubular form. Walls of uniform thickness and concentricity are assured by the use of close tolerance cold rolled strip. This double rolled strip passes through a furnace where the...

... copper coating fuses and alloys with the double steel walls. After brazing and cooling, it becomes a solid double wall steel tube, copper brazed throughout 360° of wall contact...

... copper coated inside and out, free from scale, closely held to dimensions. Hard or annealed in standard sizes up to ½" O.D. Special sizes cold drawn. Also in Monel, nickel and nickel alloys.

BUNDY TUBING



For further information that will help you solve your tubing problems, write Bundy Tubing Company, Detroit 14, Michigan

Pacific Metals Co., Ltd.
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San Francisco 10, Calif.

Standard Tube Sales Corp.
1 Admiral Ave.
Maspeth, N.Y.C., N.Y.

Lapham-Hickey Co.
3333 W. 47th Place
Chicago 32, Illinois

Rutan & Co.
404 Architects Bldg.
Phila. 3, Pa.

Eagle Metals Co.
3628 E. Marginal Way
Seattle 4, Wash.

Alloy Metal Sales Ltd.
861 Bay St.
Toronto 5, Canada

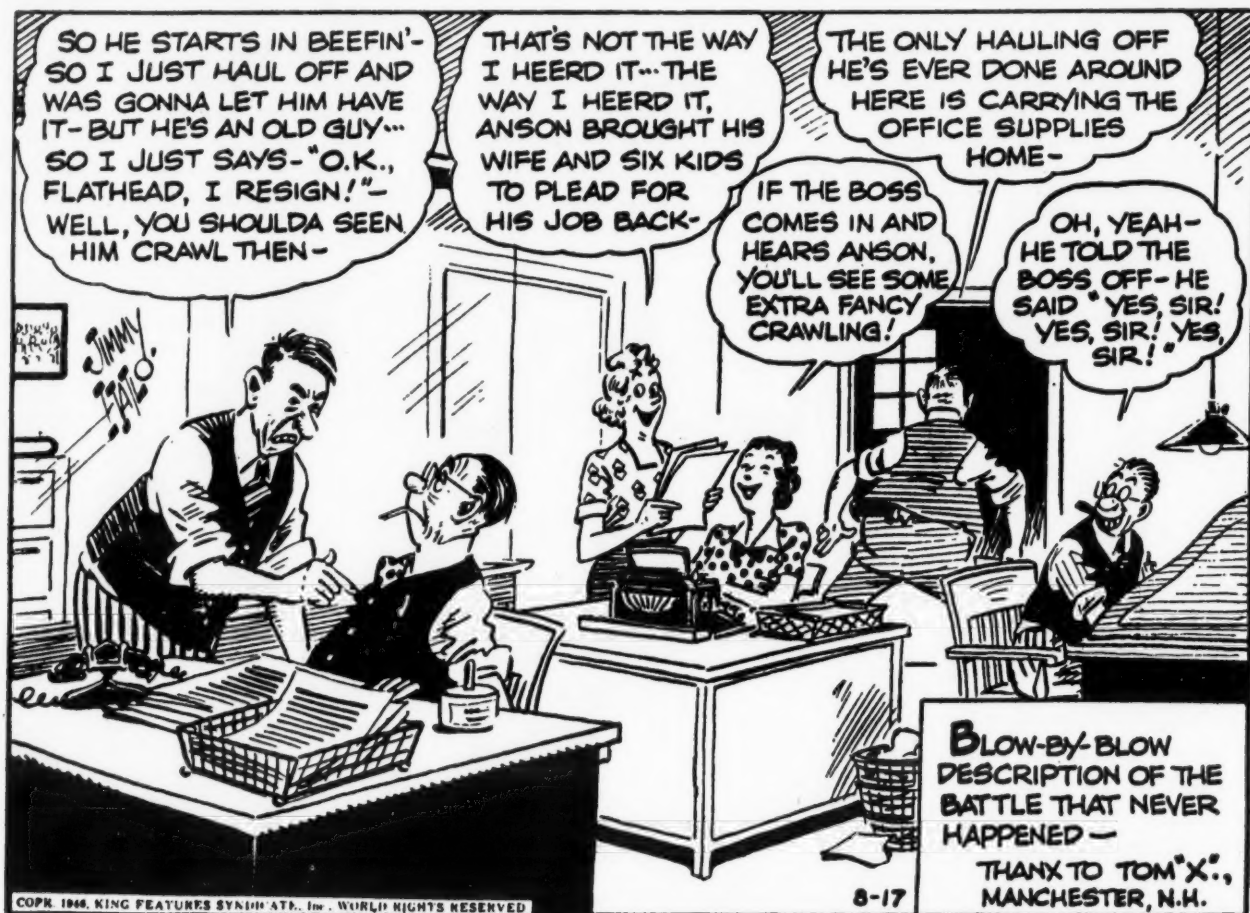
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WALL WIRE PRODUCTS COMPANY

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Makers of STAINLESS STEEL AND
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They'll Do It Every Time By Jimmy Hatlo



Out With Special Privileges--Revise the Wagner Act!



FIBERGLAS INSULATION

Helps Protect

"FROZEN ASSETS"

The Amherst Quick-Freeze Corporation's locker plant at Williamsville, N. Y., is completely Fiberglas insulated.

Fiberglas Insulation Materials with their high thermal efficiency were used in the floors, walls and ceilings of the freezer, aging and locker rooms.

As Fiberglas is glass in fiber form, it offers many advantages to locker plant operators in addition to its exceptional insulating values. Being glass it is odorless, and will not absorb odors in service. It will not rot or decay and offers no sustenance for insects, vermin or rodents, and it can be applied easily, quickly and economically.

Fiberglas Insulation for low-temperature jobs is produced in a form to meet every application requirement to solve virtually any temperature control problem. Be sure to have complete information about Fiberglas Insulation Materials. Write for descriptive literature today. Owens-Corning Fiberglas Corporation, Dept. 848, Toledo 1, Ohio. Branches in Principal Cities.

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Four FIBERGLAS products
for low-temperature work

Fiberglas A-E (Asphalt-Enclosed Board)—Fine glass fibers, compressed, treated with binder and enclosed with a tough asphalt coating to form 12" x 36" insulating blocks.

PF (Pre-Formed) Insulation—Widely used for domestic and commercial refrigerators, display cases, coolers and other low-temperature equipment. In 24" x 48" flexible pre-formed batts and rigid blocks.

Insulating Wool, Type TW-F—A soft, resilient, lightweight insulation available in roll, batt, bulk and shredded forms. Applicable to temperatures from sub-zero to 1000° F.

PF Pipe Covering—Molded Fiberglas pipe insulation for application on brine and other cold lines according to specifications. Comes in 3-foot sections for all standard pipe sizes up to 30" diameter.

William Williams, General Manager of Amherst Quick-Freeze Corp., holds Fiberglas-insulated door to Fiberglas-insulated freezing room.

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Castings, Castings, Castings—
Where Are the Castings?

If it isn't one thing it's another.

A short time ago it looked as if the manufacturers of home appliances, refrigeration and air conditioning equipment would have to shut down for several months because of the sheet steel situation.

It seemed that, since the War Department had placed an "MM" priority rating on an order for 250,000 tons of sheet steel to be delivered during the fourth quarter of this year, several of America's most important industries would have been forced to suspend operations.

This tremendous grab of precious sheet steel, according to the report, was earmarked for the production of caskets in which G.I.'s buried overseas could be brought back to cemeteries over here.

The question as to whether or not the casket-making business could fabricate all that quantity of sheet steel in three months, and as to whether there were sufficient ship bottoms available to transport all those removals across the oceans within any reasonable time, were good questions. But they weren't nearly so pertinent as simple arithmetic.

Inasmuch as less than 200,000 of our boys are buried overseas, an order for 250,000 tons of sheet steel to make caskets could only mean that each casket would weigh at least a ton-and-a-quarter. The NEWS had an editorial all ready to run which bore the following title:

"Pity the Poor Pallbearers."

Fortunately, that editorial could be thrown away because the Army, having been brought to its senses, reduced its claim to 60,000 tons.

So our industry breathed a sigh of relief—until it came face-to-face with the castings problem again. That's the great current bottleneck. And again, the government "planners" have gummed up the works. It's the mishandling of the housing construction drive which is keeping castings in short supply.

Here are some current practices which the refrigeration industry is sore about:

(1) Soil pipe makers are pouring from 80 to 100% of their product out of pig iron. In prewar days, soil pipe was composed of no more than 10 to 20% pig iron. Wyatt's housing program regulations are responsible for this extravagant formula deviation.

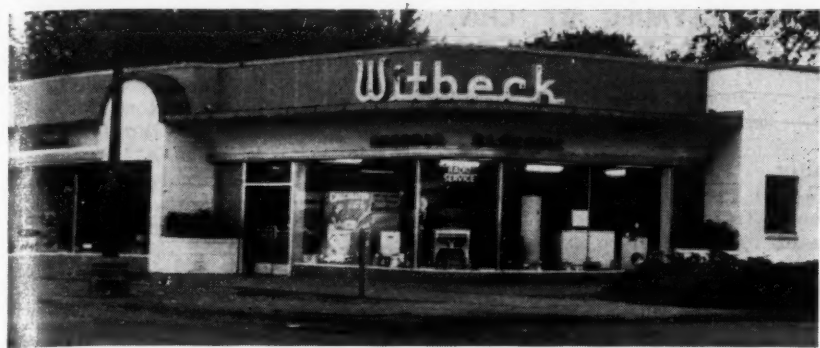
(2) Manufacturers of plumbing fixtures are making only "special type" valves and fittings nowadays. These "special type" valves and fittings are far heavier than necessary, and consequently they use an unconscionable amount of pig iron. The OPA, of course, is responsible for this situation.

(3) No effort has been made to substitute synthetic materials (many of which are demonstrably superior to cast iron) for castings in the fabrication of piping, fittings, and accessories needed in the construction of homes.

Nobody will deny that housing is a grim problem. But why batter other important and essential industries to their knees when it isn't necessary, in the vain hope that by channeling all scarce materials into home construction that one problem may be solved? As a matter of fact, there's plenty of evidence that the red-tape involved in the government-controlled housing program is actually keeping houses from being built.

The bureaucratic "planners" always do it the easy way—which invariably turns out to be the hard way for industry and the people. If controls were relaxed, and if the concept of competition (as a means of getting things done) could operate again, a reasonable balance might be achieved.

So long as the government controls are on, however, we'll be wasting pig iron, burying castings, and making caskets too heavy to lift.



At least 70% of the appliance sales chalked up by Witbeck Household Appliances come from outside the immediate trading area, proving Harold Witbeck's point in establishing his dealership on busy Woodward Ave., the main street running north out of Detroit.

Veteran Dealer Who Sticks to Appliances Does a 'Selling Job' Now for the Future

By C. Dale Mericle

FERNDALE, Mich.—In these days of scarcities when many appliance dealers have been forced to carry all types of merchandise just to have something to sell, it's a little unusual to find an appliance outlet handling nothing but appliances.

And it's possibly even more unusual that in the current "seller's market" this dealership is devoting considerable effort to "selling" instead of merely taking orders.

Witbeck Household Appliances is the dealership. It's located in Ferndale, a large suburb straight north of Detroit, on the main stem—Woodward Ave.

Learned the Hard Way

Actually, there is nothing strange about this firm's attitude, for Harold Witbeck is a veteran specialty salesman who learned how to sell refrigerators the hard way back in the late 1920's while working for the General Electric Co. distributor in Detroit. He established his dealership in Ferndale during the winter of 1932-33.

His son, A. V. Witbeck, learned specialty selling the hard way, too, and has now taken over most of the active management. Ill health has forced the elder Mr. Witbeck to take it easy, but he usually spends a full day on the floor and helps in guiding the firm.

The Witbecks felt so strongly about the matter of selling only appliances that they closed down their store during the war rather than try to keep operating through sales of furniture and similar lines.

"Even today," comments Harold Witbeck, "lots of salesmen come in trying to persuade us to take on all sorts of gadgets, but we won't. We're selling appliances, and that sort of thing belongs in a hardware store, as far as we're concerned."

The firm does carry traffic appliances in addition to the major items, but they're appliances, not gadgets, the Witbecks both point out.

A broad range of major appliances is represented. There are the full lines of G-E, Westinghouse, Norge, and Gibson, including refrigerators, home freezers, electric ranges, washers, water heaters, etc. There are

also the full Universal line, Maytag washers, Electromaster and Clark water heaters, Ironite ironers, Domestic sewing machines, Eureka vacuum cleaners, and seven lines of radios: G-E, Westinghouse, Zenith, Emerson, Bendix, Clarion, and Lear.

Deliveries have been fairly good, admits A. V. Witbeck, although he says that right now the situation seems to be getting worse instead of improving.

"By the middle of next summer, however, I think we'll have so many appliances that we'll really have to get out and sell. That's one reason why we are trying to keep in practice now."

It's no trick at all to sell an appliance now if you can make immediate delivery, but it does take a fair amount of salesmanship to sell a customer, and keep him sold, on making a deposit today for delivery in three to six months, emphasizes A. V. Witbeck.

"If we do a good selling job at first we won't have to worry about selling the customer all over again when it comes time to make the delivery," he said.

On major appliances, the Witbeck firm requires a substantial deposit with every order. This goes into the books as a conditional sales contract. The customer, of course, is privileged to get his money back if he desires, but when he does it is almost always because of absolute necessity. The Witbecks won't take an order and deposit it if they think the customer has placed similar orders with other dealers.

And in no case, says A. V. Witbeck, has a customer refused to take delivery. With small appliances, the company takes orders but no deposits. On these about 50% of the prospective buyers have turned down deliveries.

Freezers Look Good

The Witbecks are eyeing the home freezer market with much enthusiasm. "We could sell five carloads right now if we could get them," says Harold.

And A. V. points out that every prospect who looks at a refrigerator on the floor always inquires about

the amount of storage space provided for frozen foods.

A. V., however, thinks that the big market for home freezers will be more or less limited to families in the upper income brackets, at least in the immediate future.

"The business man and the professional man who have a fairly high income in good times and bad are the best prospects for home freezers now, although when the prices come down, as they probably will, we can get into the lower income market," he says.

One of the most profitable appliances, and one that is frequently passed up by the average dealer, is the electric water heater, says A. V.

"You have to know how to sell them," he admits, "but the only trick there is in selling the customer the right size. If you sell a small-capacity heater to a large family, there's going to be trouble, but if it's properly sized, this sale will lead to many others."

A. V. says he doesn't understand why more dealers in this territory don't push water heaters. The local utility, Detroit Edison, offers off-peak rates, free service, and will make a survey to determine just what size is required for a particular family, he points out.

"The dealer actually doesn't have to do much more than take the order," declared A. V.

The Witbecks handle no servicing on major appliances, this operation being handled by the distributors. Radios and vacuum cleaners are serviced, however, with B. Nefcy in charge of this department.

There is at least one other aspect in the Witbeck operation which merits attention—their bookkeeping. The firm has a regular bookkeeper,

A. V. Witbeck (left) and his father, Harold, look over a brand new appliance, the clothes drier, to prepare for "specialty selling" of this item.



Mrs. Lois Bro, but in addition the books are audited monthly. An auditor employed by a large corporation comes out once a month in his spare time to check the accounts thoroughly.

"Thus we know exactly where we stand at the end of every month, how much we've done so far this year, and whether we're losing money or not. Every firm should have this done," the Witbecks stated.

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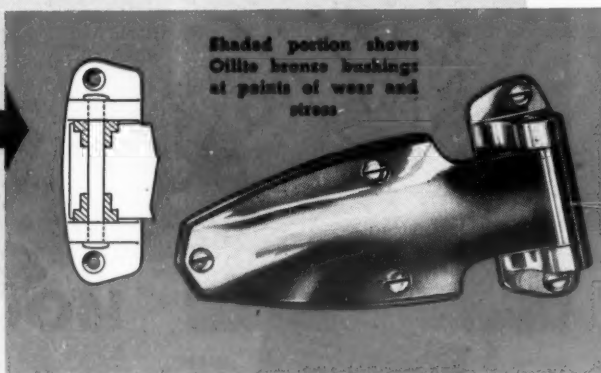
A new, exclusive principle was conceived in the development of this trip lock. It provides the strongest, most positive locking grip ever devised . . . with smooth, finger-tip operation. There is nothing comparable—in action or effectiveness—on the market.



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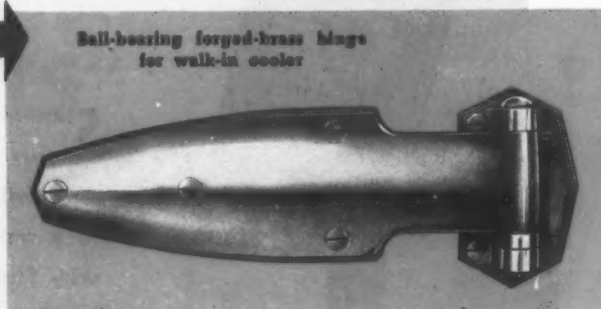
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This company seeks no credit for itself from the satisfied user of its refrigerator hardware. That credit properly goes to the concern which designs, installs, and services the entire job. Our satisfaction comes, instead, from the growing list of leading manufacturers who entrust their good name to the enduring performance of Grand Rapids Brass Company products. May we send YOU our latest catalog?

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OFF THE CHEST

HIS BLOOD PRESSURE HAS 'ATOM BOMB' REACTION

1434 W. First St.
Oil City, Pa.

Editor:

About two weeks ago my family physician gave me a physical check-up and informed me that my blood pressure was very low. He suggested a special diet together with some vitamins, etc., that I was to take after each meal, etc.

Tonight as I write this letter I believe that my blood pressure is up to the point where it could do more damage than any two atom bombs. It took about five minutes of my time to raise it to the point and I feel certain that before I enter the physician's office again if I repeat what I did this evening he will tell me that my blood pressure is dangerously high.

According to this article (enclosed) I elect or help to elect politicians to serve England instead of America the land for which my son and sons-in-law fought to save. Save from what? Evidently to save it from Hitler to give it to Stalin and Chamberlain.

God, how I wish that I could be Superman for a day. I would clean the White House out so thoroughly that there wouldn't even be a cockroach with the Democratic smell left in it.

If it isn't asking too much of you, will you please send me a reprint of "What's the Matter with America?"

EDWARD G. HLAWATI

P.S.: Am a subscriber to REFRIGERATION NEWS but subscribed too late to get the issue containing "What's the Matter with America."

'OPA USES JAW BONE OF ASS TO MATCH SAMSON'

Peoria Maytag Co.
Peoria, Ariz.

Editor:

According to your editorial on page 8 of the Sept. 16 issue, "Footnote to OPA," Samson was a weakling. He only slew 1,000 men with the jaw bone of an ass.

Our OPA has tried to starve and rob 139 million people with the same weapon.

H. G. SMITH

DEALER STYMIED BY CPA CURB ON BUILDING PLAN

Jack's Radio Service
34 West Hoffman Ave.
Lindenhurst, N. Y.

Editor:

About the only benefit I expect to receive from this letter is to let off steam. Anyway here is the story.

We started in business in 1934 and mainly through good service and merchandise grew steadily. For the past six years we have been at the above address and have carried on all through the war with only service and Mazda bulbs to sell. Our competition went for the easy money in the defense plants. When the end came most salesmen stopped in to see us first and we obtained not only all our old lines but some other good lines besides.

Then we were faced with three problems: first, lack of enough space to properly display new products; second, the building we are now in is being sold and we must move; third, while we are still able to stay here, our present landlord is trying to double our rent. With no vacant stores in town we purchased a corner close by and started to build two stores with a temporary partition in case we did not have sufficient room we could easily make one store out of two.

Some lumber was purchased late in '45 and stored at home. This Spring we started. The cellars are finished, the walls are up, front piers and windows installed and all material obtained to finish except the plate glass.

Then along comes a smart CPA inspector and asks for a permit. We only had our local building permit and since we had none suggested that for \$50 he could overlook our construction for a few weeks. Naturally he would come back for more. We said "nothing doing," and next day we received a two-page telegram ordering us to stop work immediately. That occurred about four weeks ago and although we applied to the CPA and filled out the proper forms we were denied a permit. So here we are in a squeeze play. A good business but no place to carry it on. Now comes the gripe.

Our one competitor whom we bought out in '42 and who went in a defense plant decided he was going in business again but decided this town was not good enough and opened a place about 12 miles away. Evidently the results were unsatisfactory and he decided to put up a building here in town.

All through the war we furnished him with tubes, parts, etc. He'd drop in and brag what an easy job he had. One day in particular he sat at a work bench all day and only put one bolt in whatever he was working on. And me with four members of the family in the armed forces.

Now he applied to the CPA, and as he says "cried on their shoulder and told them how hard he worked in a defense plant" and obtained a permit.

What can you suggest? We don't have to purchase any material but just need a permit to use it.

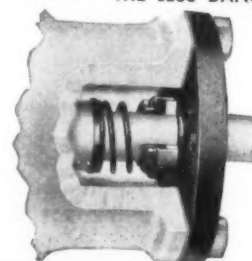
THE ROTARY COP SAYS:



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Do you suppose we can make any progress with the National Housing Authority?

Incidentally there will be two rooms behind one store for one of the veterans in the family.

JOHN A. SCHWERBEL

P.S. I see according to George Taubeneck we both have the same opinion of this administration.

BETTER EDUCATION CAN SOLVE TRUCKING TIE-UP

Kold-Hold Mfg. Co.
Lansing 4, Mich.

Editor:

The writer has followed with a great deal of interest the reaction that has taken place throughout the refrigeration and air conditioning industry in response to your recent editorials "What's the Matter with America?" and "Roosevelt's Legacy to the American People," and has felt that you are to be commended on your attitude in these editorials.

However, your editorial appearing in the July 29 issue, on the frozen food bottleneck in refrigerated trucks, reaches into the province of the writer.

Kold-Hold Mfg. Co. has, during the past 15 years, pioneered the use of refrigeration for truck applications, and we do resent the implication that the industry as a whole is unaware of the potential that exists in this field.

We daily receive inquiries from body builders, frozen food merchandisers, truck operators, etc., on the application of our product to the low temperature transportation of frozen foods, and have evolved a mass of technical information that is available for the asking.

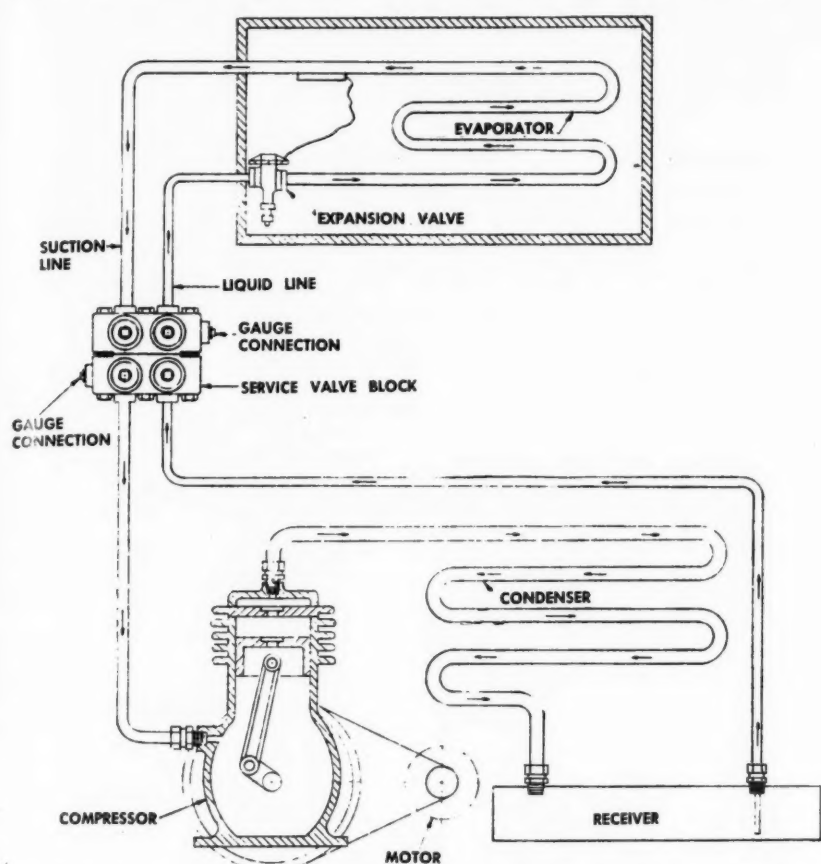
It has been the personal experience of the writer that a great deal of the difficulty lies in the fact that many of these individuals and organizations requesting this information are not fully aware of what their requirements are; some of them expect that a frozen food truck can be successfully used to haul not only frozen food, but milk, meats, and other products which require a higher operating temperature range. When approached on the cost of equipping a low temperature truck, efforts are made to "cut corners" on the cost of the equipment required, so that a temperature higher than frozen food requires will be kept, and consequently an inquiry of this kind is usually "batted" back and forth between the manufacturer and the original source before a definite solution is arrived at.

The writer also noticed in your editorial that, quoting from Mr. Weed's editorial in *Automotive News*, there are "only two manufacturers building hold-over plate type equipment," and we flatter ourselves in assuming that we are one of the two implied.

To sum up, the writer firmly believes that it is principally a matter of customer education, as well as cooperation of the refrigeration industry, that will be required to successfully circumvent the bottleneck that now exists.

ROY B. HENRIKSEN,
Sales Engineer

How Service Valve Block Is Hooked Into Lines



Although the service valve block is especially adapted for systems employing hermetic units, it also offers advantages to open type systems, Kerotest claims. This schematic drawing shows its location in the system.

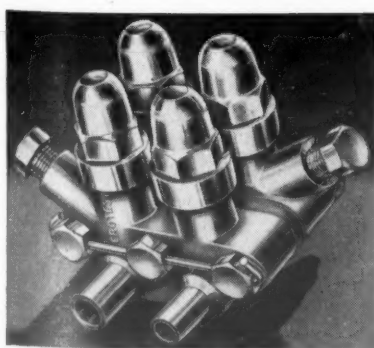
New Service Valve Block Said to Simplify Drying, Installation, Repairing of Systems

PITTSBURGH — Intended principally for self-contained low temperature and commercial applications where difficulty is experienced in cleaning, drying, and maintaining a clean dry low side, a "service valve block" has been introduced by Kerotest Mfg. Co. here.

The complete "service valve block" assembly consists of two brass forgings bolted together. Each of these forgings has two valves—a suction line valve and a liquid line valve—as well as a gauge connection. In one forging the gauge connection gives access to the suction side of the system. The other forging contains the gauge connection for the liquid side.

Thus the complete block provides two liquid line shut-off valves, two suction shut-off valves, and two gauge connections in a single compact unit, according to Kerotest.

Valve Block Assembly



Complete assembly of the Kerotest service valve block.

Numerous applications for this service block are suggested by Kerotest, such as bottle coolers, vending machines, and other self-contained cases and coolers as well as low temperature systems. It is frequently difficult because of the type of insulation and the fact that the evaporator must be built into the fixture or cabinet to keep the low side of the system clean and dry until the time when the condensing unit is connected up, says Kerotest. If the low side is dirty or laden with moisture then all the efforts of the condensing unit manufacturer to produce a bone dry unit will be nullified when the system is hooked up and placed in operation, the company points out.

By means of the new service block the following procedure becomes possible. One half of the service block is mounted to the condensing unit and connected to the outlet of the receiver and the suction side of the compressor body. The other half of the service block is connected to the liquid metering device and the outlet of the evaporator.

Both the condensing unit and the evaporator can then be cleaned and thoroughly dried at the factory and kept that way by closing the two valves in each half of the service block.

When the condensing unit and evaporator are ready for final connection it is merely necessary to join the two halves together and open the valves, claims Kerotest.

The two halves are held together by three cadmium-plated alloy steel bolts and cadmium-plated elastic-stop nuts. The heads of the bolts are

drilled and a heavy gauge copper-clad steel wire is inserted to keep them from turning.

A Neoprene asbestos gasket fits between the two halves of the service block, a .010 in. deep groove in each boss insuring a complete seal, according to Kerotest.

It is necessary to mount only one half of the complete service block to make the assembly secure, it is said. This is usually mounted on the condensing unit base by means of a single $\frac{3}{16}$ in. screw. Besides being tapped for the mounting screw the bottom of the block is also drilled for a $\frac{1}{8}$ in. drive pin to keep the block from turning.

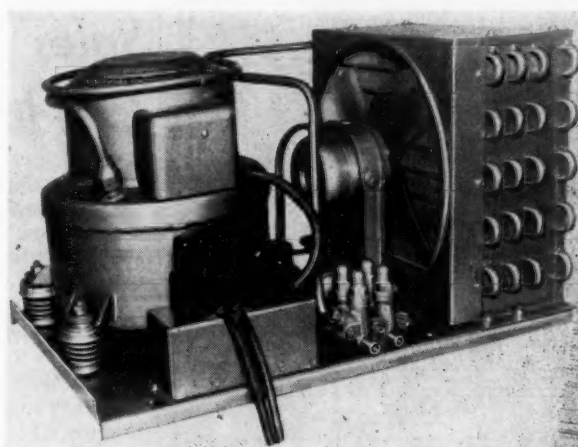
The seal caps over the valve stems are gasketed. The valves are so constructed that they provide a back-seating effect when the valves are fully open by compressing the packing, according to Kerotest.

The service blocks are designed for use on any refrigerating system using a $\frac{1}{2}$ in. or smaller suction line and are equipped with a combination $\frac{1}{2}$ and $\frac{3}{8}$ in. sweat suction connections and $\frac{3}{8}$ and $\frac{1}{4}$ in. sweat liquid connections.

The passages within the block are equal to or greater than that of $\frac{3}{8}$ in. tubing, and according to Kerotest, will cause only negligible restriction when used on a system with a $\frac{1}{2}$ in. suction line because of the short travel through the block. Kerotest states that it expects to make these blocks available for larger sizes of tubing.

Although the service block will probably find its greatest use in low temperature systems powered by hermetic units as a means of keeping the entire system dry, the assembly should prove useful in other applications, Kerotest believes.

The service valve block is shown mounted on the base of a hermetic condensing unit. One half of the block will be removed and soldered to suction and liquid lines from the low side, after which the low side can be thoroughly cleaned and dried and hand valves in the block closed, until both halves of the block are connected when installation is completed.




A producer of commercial cabinets, for example, would not have to uncrate the condensing unit as received from the manufacturer if both the unit and the cabinet were equipped with mating halves of the service block, says Kerotest. The final connections could be made in the field at the time of installation.

Such a procedure would make for

ease of handling because the unit and the cabinet would be crated separately and would further reduce the overall manufacturing and installation time and costs, contends Kerotest.

Three condensing unit manufacturers are at present supplying units equipped with these service valve blocks.



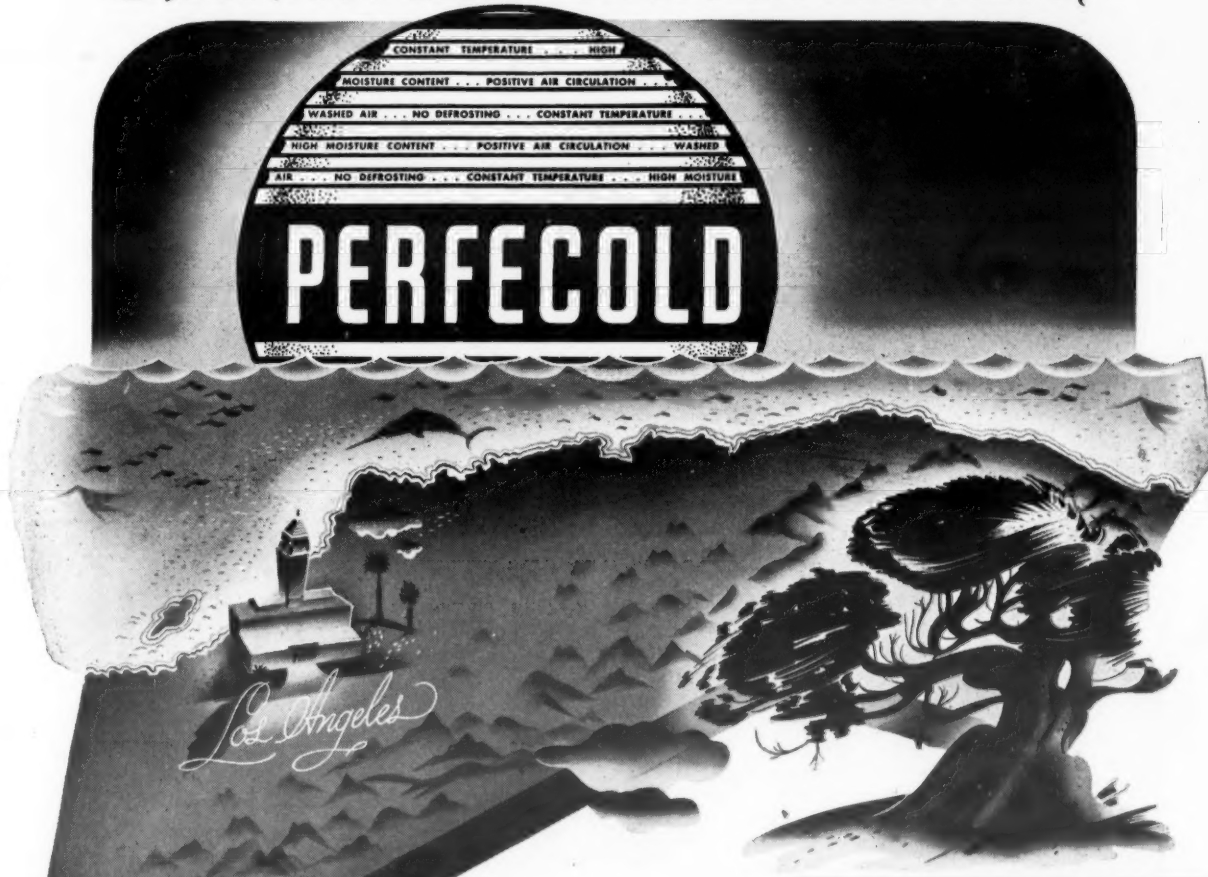
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Sales of Surplus Refrigeration & Air Conditioning Starts In 8 WAA Offices

WASHINGTON, D. C.—Eight different sales of surplus air conditioning and refrigeration equipment are scheduled during the latter half of October by War Assets Administration regional offices in Texas, Louisiana, California, Oregon, and Washington, WAA has announced.

During October, the agency is offering \$1,799,000 worth of air conditioning, refrigeration, plumbing, heating, and electrical equipment for sale.

In Texas, the San Antonio regional office will hold a fixed price sale on air conditioning and refrigeration equipment for all classes of buyers beginning Oct. 21 and ending Nov. 23.

At Texarkana, Tex., a fixed price sale on refrigeration equipment for all classes of buyers is now in progress. It is being held at the Red River ordnance plant and will close on Oct. 30.

Air conditioners are offered in a site sale at Camp Swift, Tex. to commercial and industrial buyers from Oct. 17 to Nov. 15.

The New Orleans regional office will start a fixed price sale on refrigeration equipment for veterans only on Oct. 25. The sale will continue until the property is sold out.

On the west coast, the U. S. Naval Depot at Port Hueneme, Calif., will place what blower fans it has left on sale to commercial and industrial buyers on Oct. 21.

At the Consolidated Vultee Plant No. 2 in San Diego, Calif., copper tubing will be sold at the plant ac-

cording to the following priority schedule: Veterans, Oct. 14-18; RFC and small business, Oct. 21-22; state and local governments, Oct. 23-24; non-profit institutions, Oct. 25; and commercial and industrial buyers, from Oct. 28 until the stock has been sold.

The Portland, Ore., regional office starts selling blowers to all classes of buyers on Oct. 16. The fixed price sale will continue until the property is all sold.

Two sealed bid sales on ventilating fans and valves are now in progress at the Seattle regional office. The sales are open to all classes of buyers. The ventilating fan sale ends Oct. 25, and the valve sale concludes on Oct. 22.

Contractors Form Group In Ohio Valley Section

STEBENVILLE, Ohio — Headed by Clyde Sarver, president, an Ohio Valley Association of Refrigeration Contractors was organized here recently by contractors from Steubenville, Bridgeport, East Liverpool, Follansbee, Toronto, Wordman, and Wheeling.

Besides Mr. Sarver, who has been in the refrigeration contracting business for 33 years, other officers of this group are F. P. DiCesare, vice president; A. G. Dienstel, secretary; and M. S. Chapman, treasurer.

Servicing Truck Refrigeration Units

Editor's Note: Because truck refrigeration is becoming increasingly important, the News is presenting this series of articles on the servicing of truck units to assist all service men. This portion of the series describes the Trail-Aire reverse cycle unit manufactured by Advance Mfg. Co., Detroit, and was prepared in collaboration with Henry O. Kirkpatrick, chief engineer of Advance.

Instalment No. 4

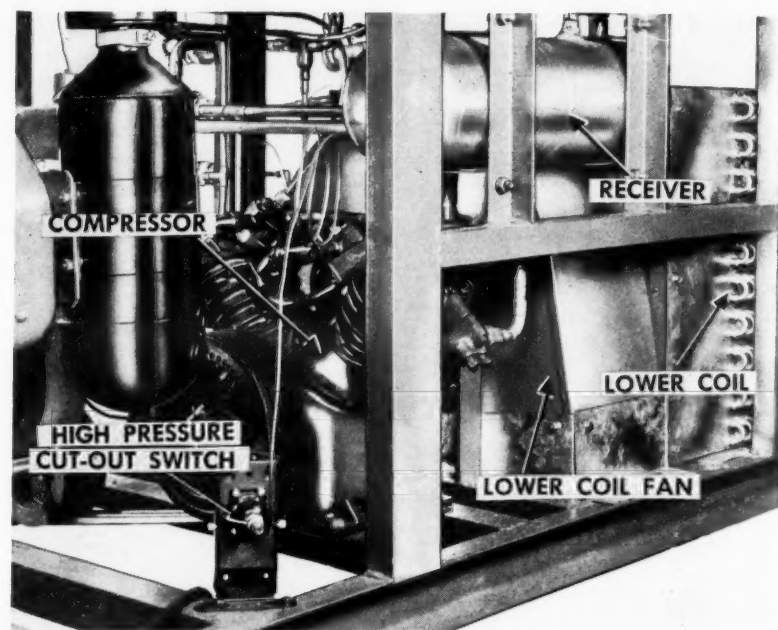


Fig. 7—Too frequent starting and stopping of the Trail-Aire unit usually is the result of high pressure in the system, a poorly insulated trailer, or air leaks through door openings. The high-pressure cut-out switch is shown above.

Unit Starts and Stops Frequently

The operation of this unit is automatically controlled so that it will maintain an even temperature inside the trailer. Therefore, the unit should run intermittently, starting and stopping as the temperature rises and falls. Certain irregularities in the refrigerating system, however, may cause the unit to operate for only very short periods. Under these conditions the engine will run a few minutes and stop, then start again a few minutes later.

Such operation is abnormal and is caused by high pressure in the refrigerating system or body of trailer not being properly insulated, or leaks through door openings. The unit is stopped by opening of the contacts in the high pressure cut-out switch. Do not attempt to raise the setting of this switch as it is non-adjustable. High pressure is a result of the compressor's being overloaded; that is, there is too much heat in the refrigerating system.

Too much heat in the refrigerating system may occur when operating on the cooling cycle with high inside trailer temperatures (above 100° F.). This would be encountered in pulling the temperature of an unloaded trailer down before loading.

Under these circumstances only, it is recommended that the cooling cycle be reduced somewhat. To reduce the refrigerant flow:

1. Stop the unit.
2. Close completely the top white valve.
3. Crack open top white valve. Caution: Never operate the unit on the cooling cycle with this valve closed tightly. Never partially close any of the other five valves.
4. As the temperature within the

trailer is lowered, open the top white valve gradually. If the unit stops, close this valve somewhat, but not completely. When the unit starts again resume opening of the valve.

5. Be sure the valve is completely open when the trailer temperature is reduced to the desired setting.

Electrical System

The cooling unit engine operation is controlled by an automatic circuit consisting of a thermostat switch, high pressure cut-out switch, manual control switch, and the engine automatic start control box.

The thermostat switch is a single-pole, double-throw gas-vapor actuated switch having a single turn, direct-reading adjustment dial. It is actuated by changes in the trailer temperature. The bulb, which contains gas vapor, is located on the face of the upper coil, and the temperature at this point controls the action of the switch.

On cooling, the switch closes the control circuit to start the unit when the trailer temperature rises above the desired setting. When the trailer temperature has been lowered, the switch opens and stops the unit.

On heating, the switch closes the control circuit when the trailer temperature drops below the desired setting, and opens the circuit to stop the unit when the trailer temperature has been raised.

The high pressure cut-out switch is the safety switch for the unit. This switch is normally closed at all times, but will open when the refrigeration pressure, as delivered by the compressor, becomes high enough to endanger the unit.

Refrigerant pressure will be high when the system is overloaded. Over-

(Continued on next page)



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- Perfectly
- Permanently

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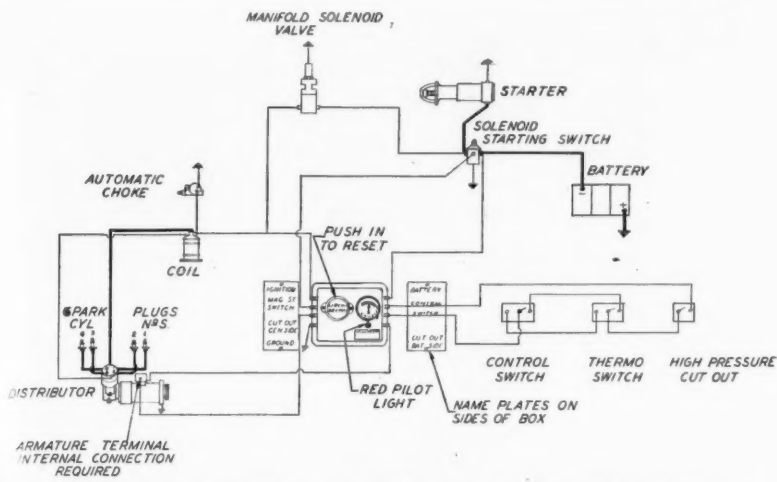


Fig. 8—This is the complete wiring diagram of the Trail-Aire electrical system, including the ignition system for the gas-engine drive.

Servicing Truck Units (Cont.)

(Continued from preceding page)

loading is usually caused by too much heat being put through the system on the cooling cycle.

When high pressure is delivered, the switch opens and the unit stops instantly. After a few minutes the pressure in the system will drop to normal and the switch will close again, starting the unit.

The manual control switch is a three-pole, double-throw switch. It is used to select heating or cooling as well as for complete shut-down of the unit. When the "Heat" button is pressed, the control circuit is completed through the low side of the thermostat. Action of the thermostat as the trailer temperature falls will close the circuit.

When the "Cool" button is pressed, the control circuit is completed through the high side of the thermostat. Action of the thermostat as the trailer temperature rises will close the circuit. When the "Stop" button is pressed, the control circuit is open.

The automatic start control box actually starts and stops the engine, both on the heating and on the cooling cycles. It contains a cranking time limit switch and an overload circuit breaker. The time limit switch permits cranking of the engine for only a few seconds.

If the engine does not start, this switch opens for a few seconds before allowing the starter to crank the engine again. This brief interval

eliminates the possibility of flooding the engine when starting.

The cranking time limit switch will operate the starter in this manner several times. If the engine does not start after these several attempts, the circuit breaker will open, preventing further cranking. This circuit breaker is provided to prevent continual cranking of the engine when it will not start and the resultant drain on the battery. (See Fig. 9.)

To energize the automatic start control box, the thermostat switch, high pressure cut-out switch, and the manual control switch must be closed. When energized by the control circuit, the automatic start control box performs the following functions:

1. It energizes the starter solenoid switch, which, in turn, energizes the starter to crank the engine.
2. It controls the automatic choke for ease in starting.
3. It closes the intake manifold valve.
4. When the generator operates it will open the circuit to the starter solenoid switch so that the starting motor stops as the engine starts.
5. If the generator fails to operate, it will shut the engine down, thus preventing a serious drain on the battery.
6. In the event the engine runs out of gasoline it will de-energize the starter circuit, thus preventing a drain on the battery.
7. When de-energized by the control circuit, it opens the intake manifold valve. This supplies a rush of air to the carburetor so that the air-cooled engine will stop immediately regardless of how hot the cylinders may be.

(To Be Continued)

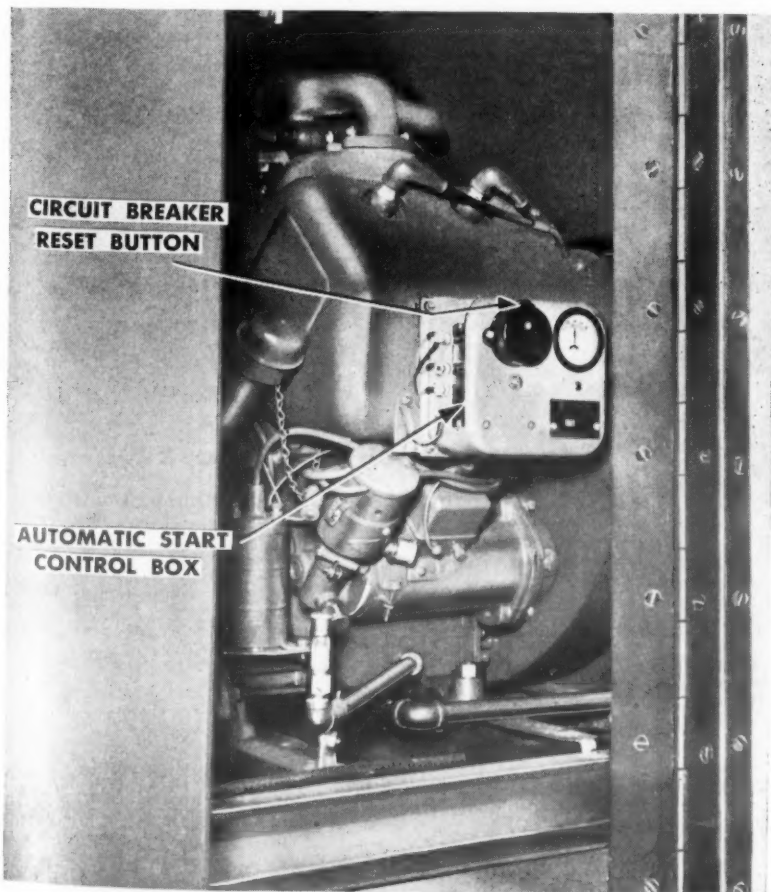


Fig. 9—Automatic start control box is mounted on the gasoline engine.

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SHAFT SEALS VALVE PLATES



With Self-Adjusting Sleeve Lock.



Only Chicago valve plates have replaceable seats.

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20 NORTH WACKER DRIVE • CHICAGO 6, ILL.

Jordan Marsh Starts Frozen Food Deliveries

BOSTON — Frozen food delivery service which will tie in with the sale of home freezers is planned by the Jordan Marsh Co., here.

Said to be the first large department store in the country to inaugurate such a service, Jordan Marsh will serve only one or two localities at first. Brookline will be covered initially, then, gradually, all greater Boston will be taken care of.

Present plans call for a scheduled weekly delivery, which will be timed so that a customer will receive items on the same day and at approximately the same time of day each week. Customers will be called for

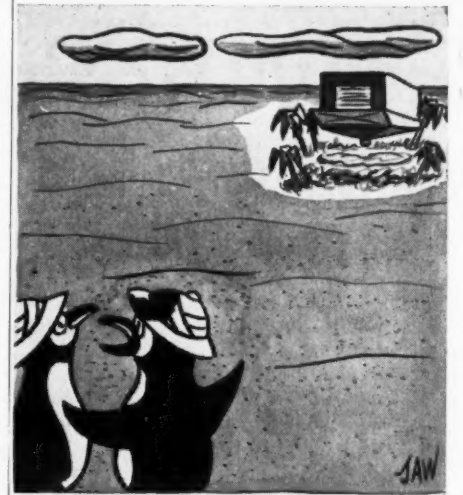
their order the day before delivery.

For the most part, home freezer sales will be limited to customers who come within the scope of the delivery service. A store spokesman asserted that "the food service and the sale of freezers are considered as one package."

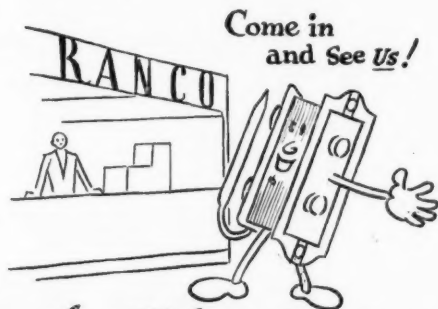
Anyone living within the area covered by the delivery service, whether or not he purchased his freezer at Jordan Marsh, will be served, the company said.

H.S. Company Organized

LOS ANGELES—H.S. Refrigeration Sales & Service is the firm name under which Paul F. Rennie and Gale L. Scott have published a certificate that they are conducting business at 4577 Valley Blvd., Los Angeles.



"That's no mirage—BUSH COOLERS are found everywhere!"

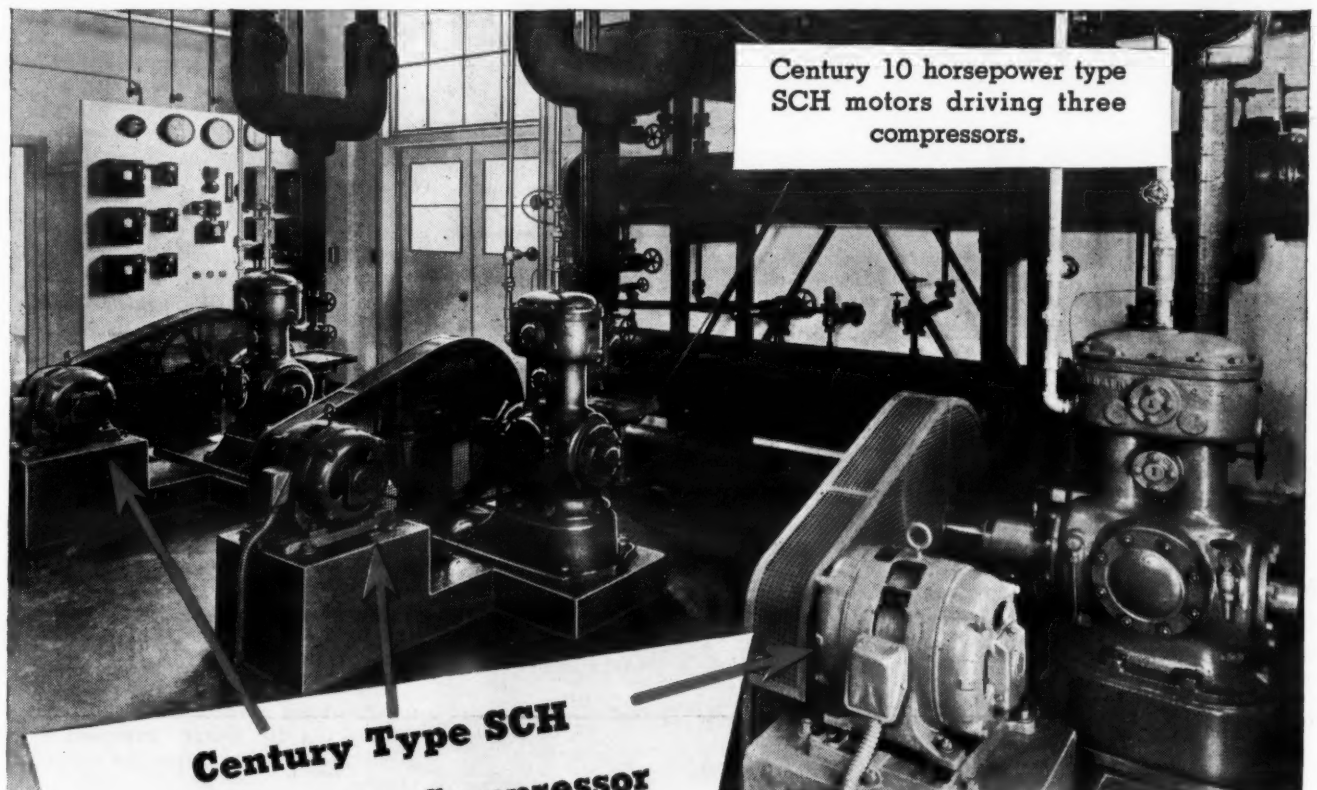


at the All-Industry Exposition in Cleveland

Have fun, friends -- we intend to -- but stop in and see us in between times.

We will be in booths 324 - 326 during the three-day show in Cleveland Public Auditorium.

Ranco Inc. COLUMBUS 1, OHIO



Century Type SCH Refrigeration Compressor Motors ...

Provide SMOOTH POWER with HIGH STARTING TORQUE and LOW STARTING CURRENT



Century refrigeration compressor motors provide a smooth, quiet, dependable source of power throughout a long life. Because they have the necessary starting torque to bring heavy loads up to full speed quickly with a low starting current, they are ideal for compressor applications.

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What's New

M-H Control Anticipates Heat Demand Changes

MINNEAPOLIS — A new instrument which anticipates changes in heat demand and provides control over the approximate amount of heat input into a house will be placed in production by the Minneapolis-Honeywell Regulator Co. here in November, John E. Haines, vice president, has announced.

The instrument, known as a compensated limit control, is designed for

use in conjunction with the volume method of the moduflow system of automatic temperature control, he said.

It may also be employed in some types of panel heating and with the conventional "on-off" thermostat method of heating, he added.

Designated by type number T 418, the new control consists primarily of a mercury switch instrument case and two capillary tubings and bulbs. The first of these tubes is 20 ft. long so that the bulb may be mounted outside of the house and exposed to outdoor temperatures. The second tube

is 10 ft. long with the bulb installed in the bonnet or warm air supply of a furnace.

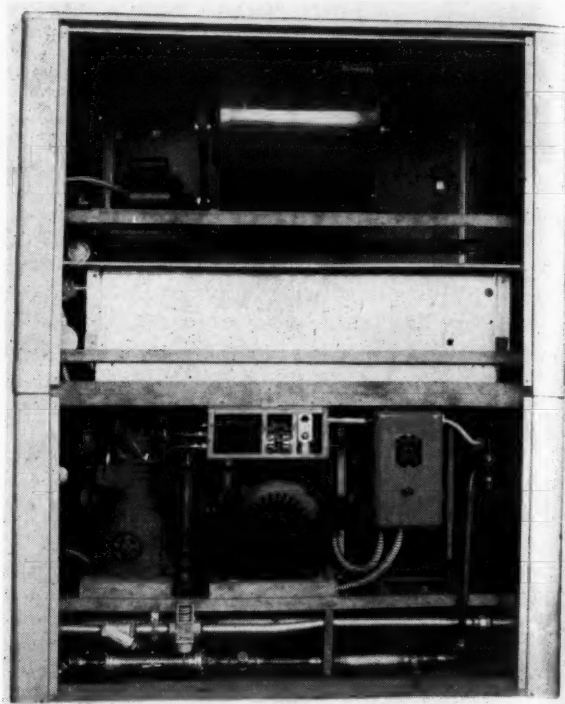
A self-contained unit, the new control generates its own power to position a mercury switch through changes in outdoor and indoor temperatures, Mr. Haines said.

To permit more precise control from the room thermostat, the compensated limit control goes into operation as outside temperatures fall below 65° F., Mr. Haines explained. At this point, the temperature in the furnace is raised according to a predetermined schedule. Thus, when the inside thermometer calls for heat, the entire heating system will be prepared to deliver heat at approximately the right temperature to the ducts.

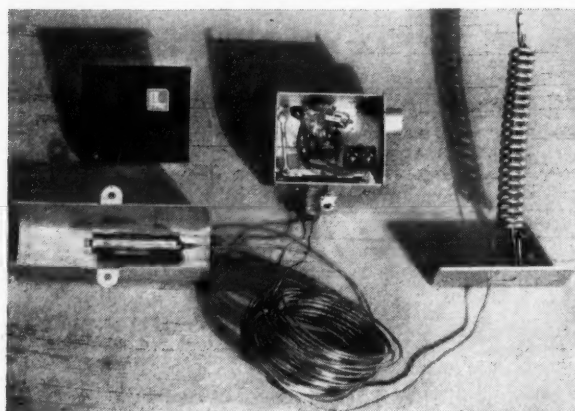
In the volume method of moduflow, the thermostat itself controls volume dampers which deliver the amount of heated air to the living space to achieve the exact temperature levels selected by the occupants of the house, he pointed out.

The compensated limit control can be used with oil, gas, or stoker fired warm air heating systems, he said.

A unique feature claimed for this Ameri-Therm conditioner manufactured by American Thermal Industries, Inc., is the air return system which is said to provide better cooling of the motor, compressor, and liquid receiver. Return air is brought in through the machine compartment in the lower section of the cabinet and is then passed up through an eliminator to the cooling coil. Designed as a package conditioner in 3 to 15 hp. sizes, this unit can be connected to ductwork. Remote installation of condensing unit or low side is also practicable.

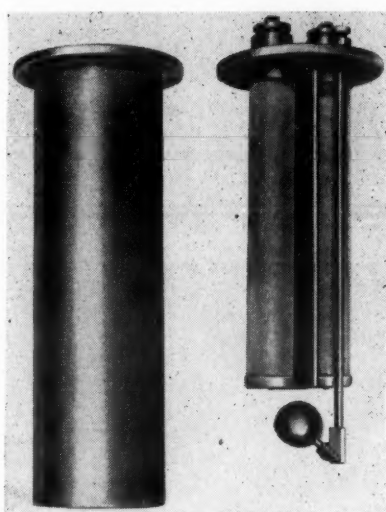


Components of Honeywell's Compensated Limit Control



Pressure fluctuations in the remote bulb (left) mounted outside and the bulb (right) placed in the bonnet of a furnace position the mercury switch (center) to anticipate changes in demand on a heating system.

Acme Oil Separator Has Double Filtering



Acme Oil Separator

JACKSON, Mich. — A reportedly new type oil separator featuring double oil separating cartridges and a five layer mesh screen on both the gas inlet and gas outlet, has been developed by Acme Industries, Inc. here.

Models of the separator will be shown for the first time at the All-Industry Refrigeration and Air Conditioning Exhibition in Cleveland, Oct. 29 to Nov. 1, the company has announced.

The new double filtration principle, designed for greater efficiency, is the result of 10 years experience in building oil separators, the company claims.

Under this principle, the proper gas velocity for removal of oil entrained in the gas is maintained, as is the correct outlet velocity, so that oil returns to the crankcase, Acme said.

The separators have a capacity range of 1/4 hp. to 10 hp., according to the company.

Accessibility of Parts Features Conditioner

DETROIT—Ranging in size from 3 to 15 hp., "Ameri-Therm" air conditioners designed for both self-contained and remote installations are now being produced by American Thermal Industries, Inc., here, announces Emanuel Feinberg, president.

Easy accessibility of all component parts for servicing is one of the features claimed for this new line, which can be adapted for winter air conditioning by the optional installation of hot water or steam heating coils.

Although primarily designed as a package conditioner, these units can be connected to ductwork, and the high and low sides remotely installed, the company says.

Full filtering area is also claimed with the front and rear filters being interchangeable. All moving parts of the conditioner are isolated from the frame to make for quiet operation, it is said.

Return air is brought through the motor compartment in the lower section of the conditioner and then passes up through the cooling coil. American Thermal Industries claims

that this system provides better cooling of the compressor, motor, and liquid receiver, and also makes possible the use of full size filters. An eliminator plate is located below the cooling coil to handle the condensate.

A "slug-free" compressor control system, accessible through a front panel, and adequate fan overload protection are other features claimed for this line.

American Thermal Industries, which also produces 6-cu. ft. home freezers, expects to move into a new plant soon at 440 Illinois Ave., Detroit, where there will be 20,000 sq. ft. of floor space.



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Team-Mates

Modern frosted food merchandising demands the efficient operation provided by Jordan "Team-Mated" low temperature refrigerators.

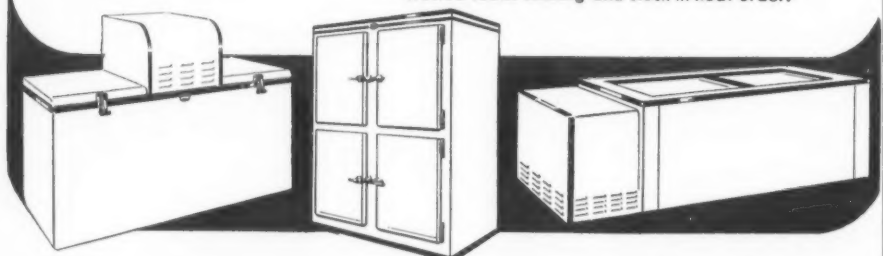
"Team-Mated" cabinets are designed for combination display and storage or multiple installations for low cost, long life operation.

There are "Team-Mated" low temperature refrigerators for clerk or self service in small stores or super markets.



MODEL S. S. 16 S. C.

A brightly illuminated silent salesman that shows off store and merchandise. Will keep sales of frosted foods soaring and stock in neat order.



KING KOLD

For large quantity low temperature storage where minimum space is available. Extra heavy insulation maintains lower temperature longer.

R-42 ALT

For extra large storage space. May be operated remotely with display case hook-up.

16 S. C.

Large size full vision clerk or self-service frozen food display case. May be used singly, in multiple units, or with other type low temperature cases.

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WRITE NOW

For information on America's finest and most complete line of commercial refrigerators.

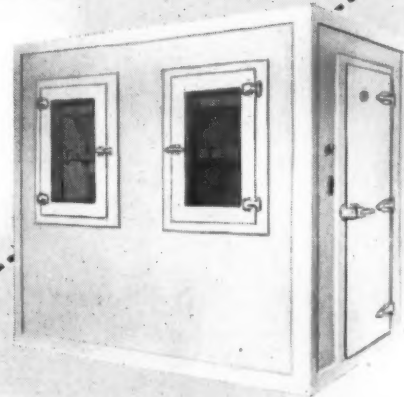
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FACTORY . . . PHILADELPHIA, PA.

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Because they are well-built in every detail and equipped with balanced coils and condensing units, they assure market operators of thoroughly dependable performance in the storage of perishables.



One member of a complete quality line . . . designed to be salable in volume at a profit.



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Wilson Speech--

(Concluded from Page 1, Column 3)
soap maker makes no soap; of which glycerine is a by-product; and without glycerine you can't make lacquer for refrigerators."

Many steel companies are discontinuing production of many grades of steel required by the electrical industry, for the reason that production costs have exceeded ceiling prices for months, Mr. Wilson said.

Citing labor's "ill-advised propaganda for further wage increases," Mr. Wilson said that it must be made clear to the American public, including the workers themselves, just what they are heading into. They are heading for depression and unemployment just as certainly and logically as night follows day.

As the market contracts, production rates will go down and unit manufacturing costs will go up. Selling prices will increase again, and the size of the market will again be reduced.

"This is the vicious path to depression; the pattern fits everything you and I make and sell; I commend it to the thoughtful study of unions."

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AIR CONDITIONING

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Steel Priorities for Ranges Refused by CPA

(Concluded from Page 1, Column 2)
steel to bathtubs and sinks for the housing program, P. J. Treacy, Chief of CPA's Steel Branch, estimated that no more than 12% of the types and gauges needed by the range industry is going into housing.

The committee members predicted a sharp decline in the output of electric ranges during the rest of the year. While Mr. Small held out little hope that more steel would be flowing into the range plants, he did estimate that the industry would still get enough steel to match their 1941 production or better.

Steel is hard to get because of manufacturers' large production schedules and their low inventories, which have still not recovered from last spring's interruption in steel production, Mr. Small said.

Pointing out that steel mills were operating at almost full capacity, Mr. Small warned that any substantial increase in steel operations now would mean time and output lost later in repair and maintenance. In fact, the present high rate may not be held unless more scrap comes into the mills and an even supply of coke is assured, he said. He also said that some of the mills need additional workers.

However, Mr. Small listed the following favorable factors:

1. Increased capacity of a couple of million tons of sheet steel scheduled to come in next fall.

2. A small increase in capacity of about 168,000 tons by next April, within existing facilities for finishing light gauge sheet, as a result of improved technical processes.

3. Some industries may soon be using less steel, as the demand for their products becomes more nearly satisfied and inventories fill up. That would leave more steel for range manufacturers and others who have still not caught up with their markets.

Some members of the committee suggested that CPA give them "plus steel" (that is, direct the mills to ship more steel than called for on quotas) to supply specified models for the housing program. Both Mr. Small and Mr. Treacy insisted that CPA was strongly opposed to this procedure, because it would disrupt normal distribution patterns, and lead to requests for such action from other plants.

The committee reported no difficulty in getting castings or finishes. Mr. Small reported that copper and copper wire supplies were improving, but that small motors would remain scarce, and that restrictions on tin would probably be necessary for another year at least.

Builders are receiving priorities for ranges, and distributors have been ordered to use as much as 75% of their receipts of ranges to fill rated orders, F. J. Sette, CPA Administrator of Priorities Regulation 33 told the committee. This action was necessary in order to avoid delays in the completion of veterans' homes and consequently rising costs.

In order to help manufacturers arrange their distribution patterns to meet housing needs and priorities,

George Morton, chief of CPA's Consumers Hard Goods Division, agreed to send to all producers in the industry a tabulation of housing starts in every state so far, and those estimated for the rest of the year.

Present at the meeting were:
Albert T. Fish, A. J. Lindemann &

Hoverson Co.; John A. Drake, Norge Division, Borg-Warner Corp.; R. M. Beatty, Westinghouse Electric Corp.; A. K. Walton, Newark Stove Co.; M. J. Maier, Malleable Iron Range; H. M. Parsons, Landers, Frary & Clark; G. L. Rees, Edison General Electric Appliance Co.

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DELCO AND WAGNER—ELECTRIC MOTOR PARTS
20,000 SQUARE FEET OF SHOP AND WAREHOUSE SPACE
SAME DAY SERVICE—ON ITEMS IN STOCK

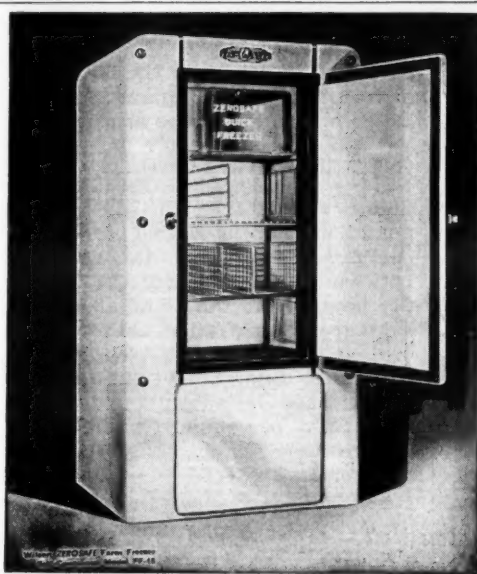
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SERVICE PARTS COMPANY

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FOR SERVICE AND PARTS—WRITE TO SERVICE PARTS



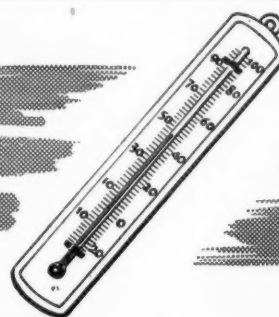
Wilson ZEROSAFE Reach-In Farm Freezer Is Years Ahead...

SINCE 1939 Enthusiastic public acceptance and constant daily use have proved Wilson ZEROSAFE the greatest reach-in farm freezer in America... These years of trouble-free ZEROSAFE service are your guarantee that "Freezers by Wilson" will continue to revolutionize American menus by making frozen fresh foods a part of daily living. **THE NEW ZEROSAFE IS NOW GREATER THAN EVER...** There is a ZEROSAFE size for every need: 15 cu. ft. (illus.) and 25 cu. ft. Self-Contained Models; and Sectional Models from 22 cu. ft. up to 120 cu. ft.

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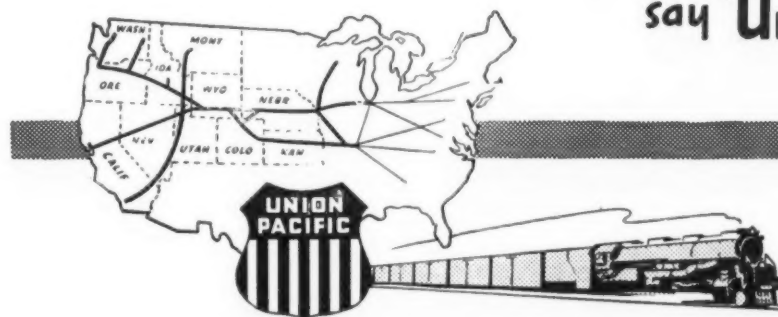
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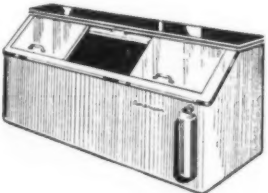
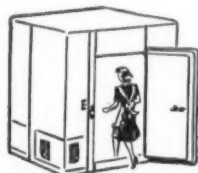
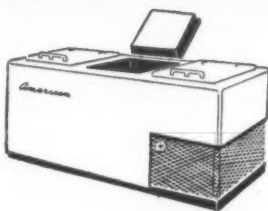
Around the world, the skill and craftsmanship of Americans is famous... and that same fine quality is found in "American" refrigeration products. At our new plant—one of the finest in design and equipment—only the best is qualified to bear this name plate.

Beauty OF THE FREEZER FIELD

American Freezers for home, farm and commercial use are dual purpose—both quick-freeze and zero-storage. A beautiful line of 8, 15 and 22 cubic foot cabinets—engineered for style and rugged duty.

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REFRIGERATION MANUFACTURERS—do you want a live wire representative for Texas? One who has years of experience and knows the business, will consider equipment, air conditioning, refrigerated fixtures and freezers. Box 2077, Air Conditioning & Refrigeration News.

SERVICE MANAGER 23 years in refrigeration service field, commercial and domestic. Thoroughly familiar with theory and practical work. Am competent to operate service department with profit to you. Can handle correspondence courteously and efficiently. Am at present employed. Prefer southwest, but consider anywhere. BOX 2097, Air Conditioning & Refrigeration News.

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Box 2098, Air Conditioning & Refrigeration News

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Engineer for designing and lining up for production new heating, refrigeration and air conditioning products with a long established nationally known heat transfer equipment manufacturer. Must be graduate of accredited engineering college with several years experience in heating, refrigeration and air conditioning fields. Experience in heat transfer and fluid flow, also in manufacturing processes such as all types of welding, brazing, soldering and forming of steel, brass, copper, aluminum, etc., desirable.

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BY A QUARTER CENTURY OF REFRIGERATION KNOW-HOW
Plan your automatic refrigeration installations for a triple advantage: Proved performance, low first cost, low maintenance cost. LIPMAN machines for dependable service in any field of commercial refrigeration are the result of more than a quarter century of manufacturing know-how. Let LIPMAN serve your needs profitably!

GENERAL REFRIGERATION DIVISION



WANTED PRODUCTION engineer superintendent for producing coolers and cases, must understand wood and metal construction, make drawings, train men, be experienced in all plant operations, have successful record, old firm centrally located. Give qualifications, etc. BOX 2086, Air Conditioning & Refrigeration News.

MANUFACTURER OF automatic controls has several openings in Sales Department for qualified Sales Engineers. Knowledge of refrigeration and ability to travel essential. Compensation on salary plus bonus arrangement. Forward complete information for personal interview, BOX 2095, Air Conditioning & Refrigeration News.

SALES REPRESENTATIVE for prominent midwestern manufacturer of refrigeration accessories to cover Texas, Oklahoma, and Louisiana. Must have knowledge of refrigeration and air conditioning; good trade and jobber following desirable. Compensation—salary, commission and expenses or, straight commission. Replies held confidential. BOX 2100, Air Conditioning & Refrigeration News.

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IMMEDIATE DELIVERY 6 hole ice cream freezers, streamlined cabinet—stainless steel top. Sealed Hull \$175. Stainless steel dairy case, 7, 8, 10 feet. **ACCURATE METAL WORKS**, 837 Tilden St., New York, N. Y., OL 5-6905.

FOR IMMEDIATE DELIVERY double duty stainless steel butcher, delicatessen and dairy display cases, 6'-8'-10' and 12' lengths complete with coils. Also 5 and 10 gallon electric water coolers. For Information Apply: **COMMERCIAL REFRIGERATION SERVICE CO.**, 651 Atlantic Ave., Brooklyn, N. Y.

IMMEDIATE DELIVERY—new air conditioning equipment. Weathermakers complete with motor, "Freon" coil, expansion valve, drives, filters, etc. 2 ton up to 25 ton (1,000 to 12,000 CFM Capacity); centrifugal blowers, SWSI and DWDI and twin mounted, propeller fans, heating and cooling coils, evaporative condensers. **CONTROLTEMP EQUIPMENT SALES CO.**, 236 Butler St., Brooklyn 17, N. Y.

FOR SALE: 10,000 new aluminum ice cube trays in three popular sizes. Also air-cooled and water-cooled remanufactured condensing units 1/2 up to 2 hp. Write for particulars. **EDISON COOLING CORP.**, 310 E. 149th St., Bronx 51, N. Y.

IMMEDIATE DELIVERY 20 cu. ft. all-steel glass top Freezers; upright glass top or open, with superstructure; Ice Cream, Frozen Food open and closed cabinets; Reach-ins, Wood and Metal Storage Boxes; all glass Sliding Door Dairy Refrigerators; Beverage Coolers; Air Conditioning Units; Motors 5-20 hp., etc. **FRIGITEMP CORP.**, 931 Bergen St., Brooklyn 16, N. Y. Main 2-9093.

FAIRBANKS BUTCHERS BEAM SCALES 600 lb. capacity. Brand new. \$29.50 net each, f.o.b. Philadelphia. Limited quantity. Order a stock today! Terms: 25% with order. Balance c.o.d. or sight draft. **GENERAL REFRIGERATOR & STORE FIXTURE CO.**, 856 N. Broad St., Philadelphia, Pa.

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Refrigeration Problems And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration and Air Conditioning Division, Perflex Corp.

How to Make Use of the Mollier Chart (Part 2)

The difference between the heat content of the 5° liquid at B which is 9.32 B.t.u. per pound and the 5° saturated vapor at D which is 78.79 B.t.u. per pound or 69.47 B.t.u. per pound is the amount of heat taken up by the vaporizing of 1 pound of the 5° liquid, that is, it is the latent heat of vaporization of "Freon-12" at 5°. Reference to the tables confirms this.

NET REFRIGERATING EFFECT

But all of this 69.47 B.t.u. per pound is not available for useful cooling. Some of it, the difference between the liquid at 86° (27.72 B.t.u. per pound) and the liquid at 5° (9.32 B.t.u. per pound) had to be used in cooling the 86° liquid itself down to 5°. This difference, 18.4 B.t.u. per pound, must be subtracted from the 69.47 B.t.u. per pound (latent heat of vaporization) leaving only 51.07 "net refrigerating effect."

Another, and easier way to obtain the net refrigerating effect is to subtract the total heat of the 86° liquid at point B (27.72 B.t.u. per pound) from the total heat in the 5° saturated vapor (78.79 B.t.u. per pound) at point D.

Enough heat, 78.79 B.t.u. per pound, has been added to the liquid so that by the time it has reached point D it has all been turned into a saturated vapor. So the curved line on the right of the diagram is the saturated vapor line. The refrigerant in between the saturated liquid and the saturated vapor lines is in the condition in which it exists in the evaporator, part liquid, part saturated vapor.

The more heat that is added the smaller becomes the percentage of liquid and the larger the percentage of saturated vapor, but both its temperature and its pressure remain constant. So, at the point D the liquid is all vaporized into a saturated vapor still at 5° and at 26.51 p.s.i.a.

SUPERHEATING OF THE SUCTION VAPOR

When the saturated vapor leaves the evaporator it begins to be warmed in the suction line or perhaps all of the liquid was vaporized before it got out of the evaporator. Heat added to the refrigerant after all the liquid is vaporized warms the refrigerant above the saturation temperature but its pressure does not change.

In this example, we will suppose that in the suction line the vapor is warmed to 65°, that is, it is superheated 60° at point E which represents the conditions at which the vapor, superheated to 65° enters the compressor.

The point E is established when the constant pressure line (at 26.5

p.s.i.a.) crosses the 65° constant temperature line.

All of the region to the right of the saturated vapor line represents superheated vapor; vapor that has been heated (its heat content has been increased) above 5° but the pressure has not changed. If the pressure does not change, point E must stay on the 26.51 p.s.i.a. line but when superheated it will be to the right of the saturated vapor line because heat has been added.

Reading on the abscissa under E we find that at this point the heat content of the superheated vapor is about 87 B.t.u. per pound (exactly, it is 87.35 B.t.u. per pound) so it has gained 8.56 B.t.u. per pound (87.35 - 78.79) of superheat from the 5° saturated vapor to the 65° superheated vapor, still at 26.51 p.s.i.a. (11.8 p.s.i.).

ENTROPY

Now we must bring in a new term, that hateful word "entropy." When

the 65° superheated vapor enters the compressor it is compressed back up to the condensing pressure we started out with, 107.9 p.s.i.a. (93.2 p.s.i.) corresponding to the condensing temperature of 86°.

But the vapor has had work done on it in compressing it and that work turns into heat that is added to the vapor as it is compressed, so its heat content, its temperature, and its pressure all three rise. In this act of compression one thing remains constant—the entropy, which is the ratio of the heat content to the absolute temperature.

Or putting it another way, during compression the temperature of the vapor rises at the same rate as the heat content. (This is not quite true in practice, but nearly so.)

Looking on the entropy lines we find that point E lies between the two entropy lines .18 and .19 and we estimate it to be about .187 (actually it is .18748). We draw in an entropy

(Concluded on next page)

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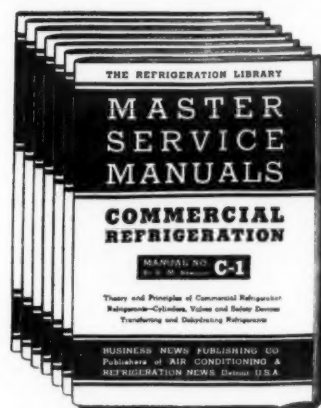
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The Mollier Chart - -

(Concluded from preceding page)

line $\frac{3}{4}$ of the way between the .18 and .19 lines and mark the point where it crosses the 107.9 p.s.i.a. constant pressure line as F.

TEMPERATURE OF THE DISCHARGE GAS

F falls just above the 160° line and we estimate it to be about 162° (calculation from the tables shows it to be 161.8). This is the temperature of the hot compressed vapor coming from the compressor. This gas must be cooled down to 86° before it will start to condense, for 86° is the condensing temperature.

HEAT CONTENT OF THE HOT GAS

F falls almost on the 100 B.t.u. per pound heat content line and we could safely use that value for ordinary purposes although calculation from the tables shows it to be 99.68 B.t.u. per pound.

HEAT OF COMPRESSION

Thus the vapor from the compressor enters the condenser at point F at a temperature of 161.8°, with a heat content of 99.68 B.t.u. per pound and at a pressure of 107.9 p.s.i.a. (93.2 p.s.i. gauge). It holds some superheat and this superheat will not all be gone until it cools down to 86° at point G on the saturated vapor curve.

At point G the heat content is read (on the abscissa) as approximately 87.37. The superheat from 161.8° to 86° is therefore 12.31 B.t.u. per pound. 99.68 - 87.37. Since the vapor entered the compressor with a heat content of 87.35 B.t.u. per pound, the heat of compression is 12.33 B.t.u. per pound (99.68 - 87.35).

HEAT REMOVED IN THE CONDENSER

From there on the heat removed is the latent heat of condensation at saturation conditions. Finally, enough heat is removed by the condensing medium, air or water, that all of the vapor is changed back to liquid, still at 86° and still at 107.9 p.s.i.a. This is at point A back where we started, the solid liquid, after it gets out of the condenser and just before it enters the expansion valve.

Remember that at A, the condenser outlet, the heat content was 27.72 and at F where the hot gas entered the condenser, the heat content was 99.68. The difference 71.96 B.t.u. per pound is the amount of heat removed by the condenser. Of this, 12.31 B.t.u. per pound is the sensible heat and the balance 59.65 B.t.u. per pound is the latent heat.

The water through a water cooled condenser must remove the sensible heat, the 12.31 B.t.u. per pound, as well as the latent heat (59.65 B.t.u. per pound) to allow the vapor to change back to a liquid. Out of the total 71.96 B.t.u. per pound, 12.33 or 17% (12.33 ÷ 71.96) is heat of compression and the remaining 83% (59.63 B.t.u.) is the latent heat.

CAPACITY CHECK BY HEAT IN CONDENSER WATER

Suppose we have a water-cooled "Freon" condensing unit operating

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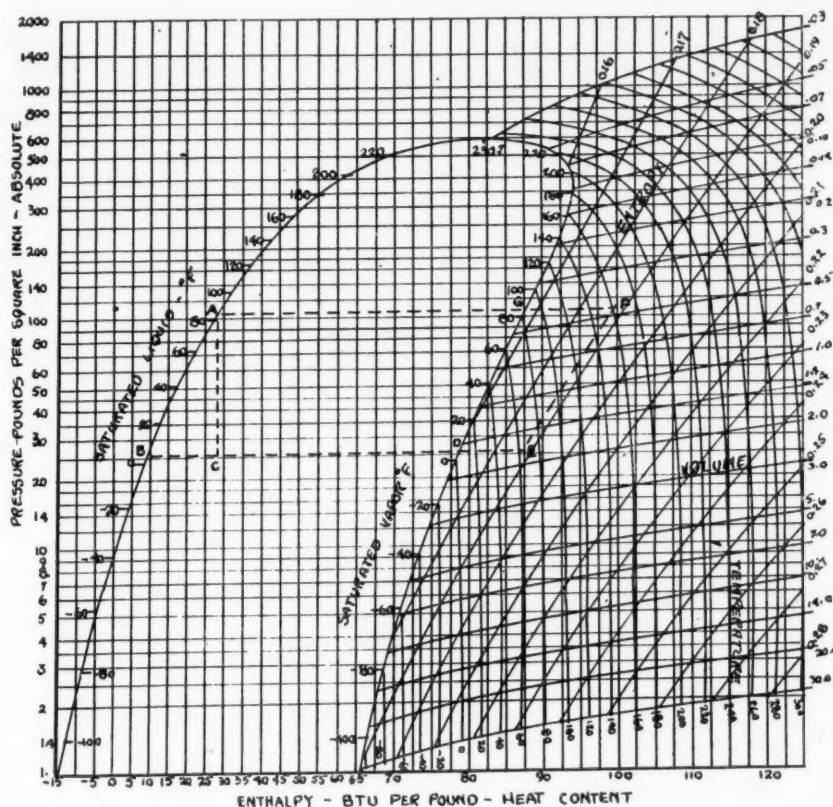


Fig. 1—Use of this Mollier chart for "Freon-12" may help the service man to diagnose the trouble in those systems which seem to operate perfectly, but won't produce the required refrigeration effect.

with a 5° evaporator and at 86° condensing (107.9 p.s.i.a. or 93.7 p.s.i. gauge), and by measuring the condensing water, we find out that it is using 14½ gallons or 120½ pounds of water per minute. The outlet water is 20° warmer than the inlet water.

Thus the total heat removed by the water is $120\frac{1}{2} \times 20 = 2,410$ B.t.u. per minute. But, only 83% of this represents actual refrigerating capacity, so the net capacity of this unit is $.83 \times 2,410 = 2,000$ B.t.u. per minute or 10 tons per 24 hours since one ton per 24 hours is at the rate of 200 B.t.u. per minute.

HORSEPOWER

Of the 2,410 B.t.u. per minute, 410 B.t.u. per minute was the heat of compression, the heat put into the vapor by the work of the motor. One horsepower is equivalent to 42.44 B.t.u. per minute (a standard conversion factor) so theoretically this machine would take a motor of 9.7 hp. ($410 \div 42.44$).

Such a motor would have to be 100% efficient and as a motor of this size would probably be about 70% efficient, actually the motor would have to be 13.9 hp. ($9.7 \div 70\%$) so a 15-hp. motor would be used, and it would be almost fully loaded under these conditions. If we estimate that for each horsepower of the motor 1,000 watts or one kilowatt will be used, then the 15-hp. motor will use approximately 14 KW per hour that it operates.

VOLUME OF THE VAPOR

Note also that there are constant volume lines on the chart from which the volume of the saturated or superheated vapor in cubic feet per pound, can be determined. At point D where the vapor is saturated just as it leaves the active part of the evaporator,

its volume is about 1½ cu. ft. per pound (from the tables 1.485) but by the time it is superheated to 65° and enters the compressor it has a greater volume, about 1¾ cu. ft. per pound. (From the tables it is 1.67.)

REFRIGERANT CIRCULATED

The above 10-ton machine has a capacity of 2,000 B.t.u. per minute. We found that the net refrigerating effect under these conditions is 51.07 B.t.u. per pound, so 39.16 ($2,000 \div 51.07$) pounds of "Freon-12" will have to be vaporized per minute which

means that this much will have to be circulated per minute.

COMPRESSOR DISPLACEMENT

We saw that the compressor must pump 39.16 pounds of "Freon-12" per minute and we saw also that at the entrance to the compressor the 5° "Freon-12" vapor superheated to 65° had a volume of 1.67 cu. ft. per pound. Thus the compressor must pump 65.4 cu. ft. per minute (39.16×1.67). If it could completely fill and exhaust its cylinders each stroke the compressor would need to have a displacement of only 65.4 cu. ft. per minute.

However, even a fairly good compressor can only do 80% that well (80% volumetric efficiency), so in reality the compressor would have to have a 81.7 cu. ft. per minute displacement ($65.4 \div 80\%$). If it ran at 600 r.p.m. the total volume of the cylinders would have to be 235 cu. in. A 4-cylinder compressor with a 4 in. bore and a 4½ in. stroke running at 600 r.p.m., at 80% volumetric efficiency could do it.

The chart shows also the critical temperature 232.7° as the highest temperature on the saturation curve, for above the critical temperature the vapor does not condense even though the pressure is increased. The critical pressure 582 p.s.i.a. is read on the ordinate opposite the critical temperature.

The Mollier chart shown is used less than a smaller section of it from about -40° up to about 140°, for within this range refrigeration equipment normally operates and the smaller section of the entire chart can be drawn to larger scale for accuracy.

The manufacturers of all the common refrigerants, ammonia, methyl chloride, sulphur dioxide as well as the "Freons," can supply Mollier charts on the various refrigerants. Also they are shown in various textbooks and reference books. A knowledge of their use or at least what they show, is of considerable value to anyone engaged in the design, application, installation, and service of refrigerating equipment.



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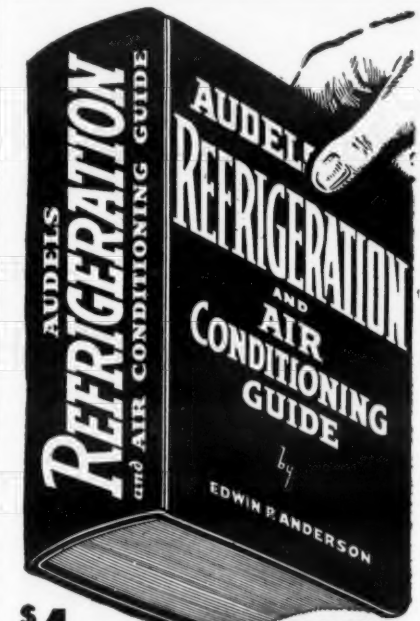
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FTC Asks Examples On Dairy Charges

WASHINGTON, D. C.—The Federal Trade Commission has requested additional information in the form of specific examples of alleged unfair competition, in the matter of the charges filed by the Refrigeration Contractors Association of Northern California that dairy and ice cream companies were engaging in unfair practices in the sale and installation of refrigeration equipment.

The action by the California group is known to have the backing of the National Association of Refrigeration Contractors. The contractors are said to be making efforts to extend the scope of their investigation to bottling companies and frozen food distributors. The N.A.R.C. has sent out literature urging all contractors to report unfair trade practices.

Charges Do Not Involve Valley Equipment Co.

SAN FRANCISCO—The Refrigeration Contractors Association of Northern California has made public a statement to the effect that its complaint did not in any way name the Valley Equipment Co. of Lodi, Calif., a commercial refrigeration dealer.

Since reference was made to a Lodi firm in the complaint the Valley Equipment Co. immediately wrote the Association, pointing out that it has never sold any refrigeration equipment as part of a "tie in" sale of the type described in the charges. The Association assured the firm that it had not been named in the charges.

HH Ratings --

(Concluded from Page 1, Column 2)
be a new home built under the Veteran Emergency Housing Program?

The subscriber pointed out that Priorities Regulation 33 issued by the Civilian Production Administration apparently indicated that under the above conditions a veteran could obtain the rating and that dealers must sell up to 75% of their ranges under conditions which would include these circumstances.

However, the subscriber said, Schedule B to PR 33 defines a "distributor" as one who sells materials to a "user," and defines a user as "a builder, prefabricated house or trailer manufacturer, a person who normally installs what he sells, such as a plumbing contractor, wiring contractor, etc."

This definition of a user, concluded the subscriber, would not appear to include an individual veteran buying at retail for his personal use.

In reply, General Counsel Krooth declared:

"Section (c) (1) (i) of Housing Expediter Priorities Regulation 5 provides that a 'veteran who wishes to build, alter, or repair a house for his occupancy as owner' may apply for priorities assistance under that regulation."

"As used in Section (c) (1) (i), the terms 'alter' and 'repair' each include the installation of a gas range in a house. Therefore, a veteran is entitled to an HH preference rating to obtain a gas range for installation in a house which he owns and occupies."

"The definition of 'distributor' in Schedule B lists examples of persons who are considered 'users.' In addition to those specifically listed, the term 'user' includes a person purchasing for installation in his own dwelling."

"Schedule B provides that rated orders must be accepted by distributors, and explains the rules for filling such orders. If the HH rated order of the veteran falls within those rules, it must be treated like an HH rated order from any other user."

Cleveland Firm Gets New Address

CLEVELAND — New address of Northern Ohio Appliances, Inc. here is 1609 East 21st St. where the firm has occupied larger quarters.

Price Violations --

(Concluded from Page 1, Column 4)
ucts had been involved. However, some cases of violations in direct mill shipments have also been uncovered.

(Some buyers of steel in the refrigeration industry have commented on the diminishing supply of steel through normal trade channels, despite continuing high production of steel products.)

OPA stressed the following facts in a warning to all buyers and sellers of iron and steel products:

1. Maximum prices for resales of iron and steel products are listed in the pricing regulation, Revised Price Schedule No. 49—Resale of Iron and Steel Products—and must be strictly observed by all buyers and resellers.

2. No charges for finding the material which result in the buyer paying more than the ceiling price are permitted in any sale.

3. It is illegal for the seller to charge more than the maximum price for any of these products and also illegal for the buyer to pay more than the ceiling price in such sales.

4. An intermediary in the sale or purchase of an iron or steel product may receive payment for his help in the transaction, only by arranging with the seller to pay him a commission out of his legal maximum selling price, or arranging with buyer to buy the material below the maximum price and pay the intermediary the difference between the maximum sales price and the buyer's lower price. In other words, the maximum price must be observed in all sales.

5. Persons buying materials for their own account and then reselling it, become principals in the sale and must sell at or below the maximum price for the type of sale involved.

Dairy Show --

(Concluded from Page 1, Column 3)

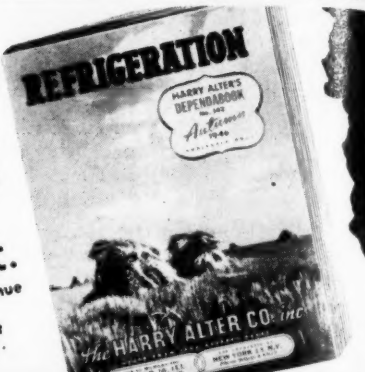
Bastian-Blessing Co.; Cherry-Burrell Corp.; Dole Refrigerating Co.; Frigid-Aire Division, General Motors Corp.; Kalva Corp.; Kelvinator Division, Nash-Kelvinator Corp.; Kold-Hold Mfg. Co.; Liquid Carbonic Corp.; C. Nelson Mfg. Co.; Savage Arms Corp.; Stangard-Dickerson Corp.; Emery Thompson Machine & Supply Co.; Weber Showcase & Fixture Co., Inc., and York Corp.

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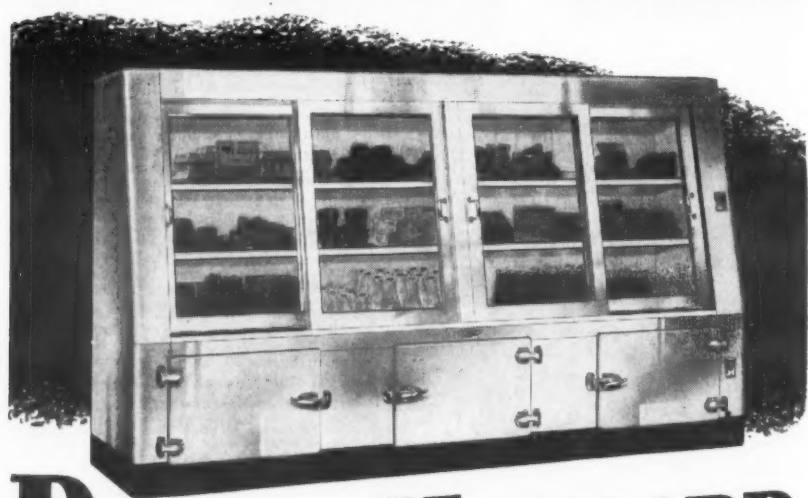
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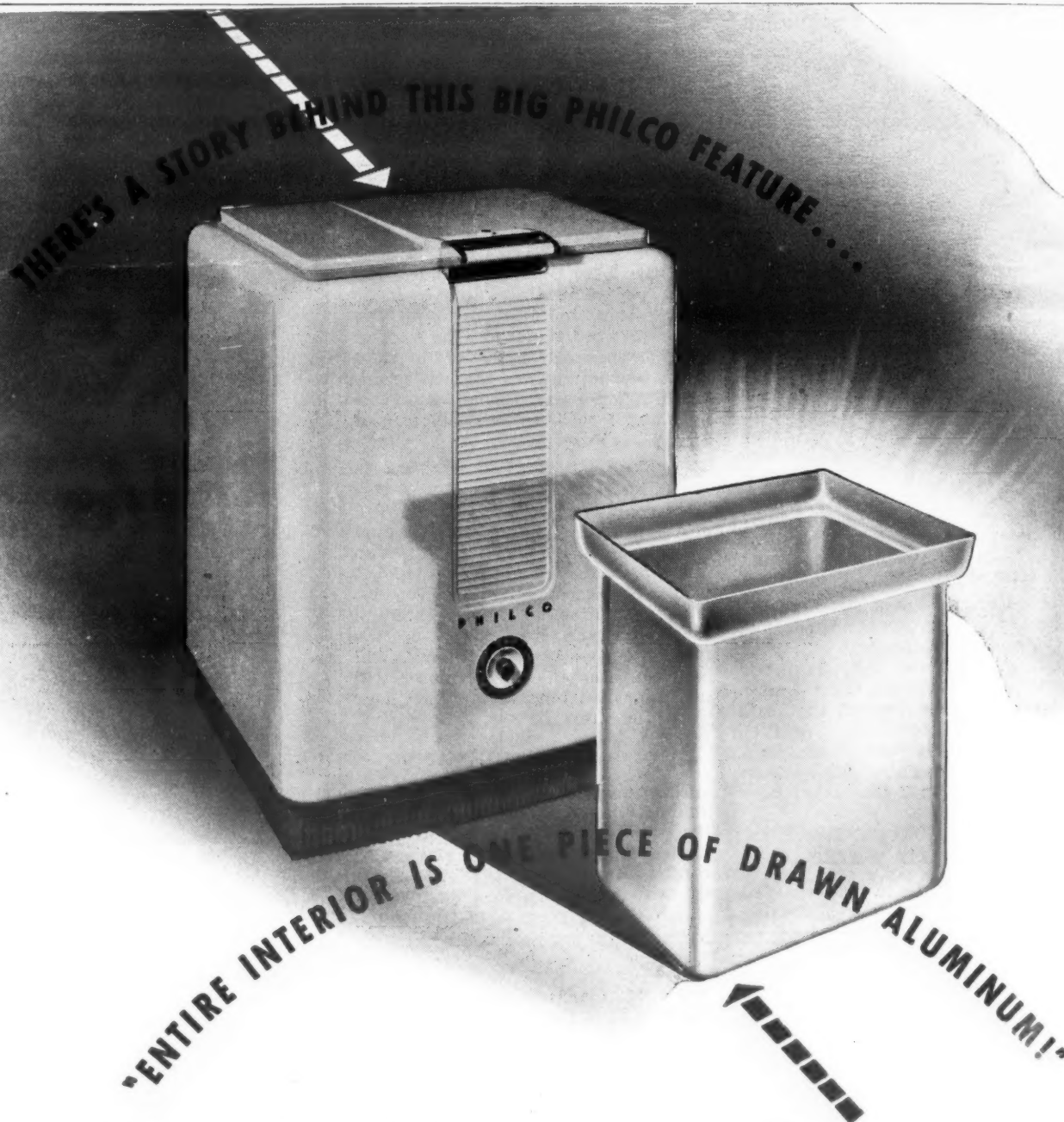
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